REPORT

OF THE

LAND REVENUE REFORMS COMMITTEE

1958-1959

PART I—Volumes (i) & (ii)

K. N. ANANTA RAMAN, I. C. S.
Chairman.

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PART I—Volume (i)

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CHAPTER I

INTRODUCTION

As there are wide disparities in the pitch of land revenue assessments and irrigation charges in the different regions of the State, which have arisen partly due to the adoption of different methods of levy in different tracts and at different times, the Government in their Order Ms. No. 2417, Revenue Department dated 23-12-1957 (copy appended), appointed the Land Revenue Reforms Committee to examine the existing systems and rates of land revenue assessments and irrigation charges obtaining in the various regions of the State and to make suitable recommendations for their rationalisation, with :

Sri K. N. Anantaraman, I.C.S., a member of the Board of Revenue as a whole-time Chairman,

with

1. Sri H. Sitarama Reddy, Former Revenue Minister of Composite Madras State, Halaharvi, Alur taluk, Kurnool district.
2. Sri C. Vivekananda Murty, I.A.S. (Retd.), Retired Chairman, Andhra Pradesh Public Service Commission, Kakinada.
3. Sri D. V. Rao, B.Sc. (Lond.), M.I.E., Retired Chief Engineer, Hyderabad, and
4. Sri J. Raghotham Reddy, M.L.C., Vice-President, Hyderabad Farmers' Union, Mahbubabad, Warangal District, as members.

Sri D. Basava Raju, I.A.S., was appointed as the Secretary.

The terms of reference to the Committee are :

(1) to examine the principles and methods of levy of land revenue assessments, followed in the various regions of the State and make recommendations for their rationalisation ;

(2) to examine the rates of assessment levied, in respect of different classes of land, in the various regions of the State, and to make suggestions for their revision, in the light of its recommendations, under item (1) above, with a view to reduce inequities in their incidence ;

(3) to take account of the principles and methods followed in the various regions of the State in regard to the levy of charges

for irrigation of lands under various sources of irrigation and make recommendations for their rationalisation ;

(4) to examine the rates of irrigation charges levied in respect of various classes of crops under different sources of irrigation in the various regions of the State and to make suggestions for their revision, in the light of its recommendations under item (3) above ; and

(5) to examine all other matters incidental to the levy of land revenue assessment and irrigation charges and make appropriate recommendations thereon.

2. The Chairman initiated the work of the Committee on 10th January 1958, by reading the procedure for the fixation of Government demand and explained briefly the principles of settlement, in force, in Andhra and Telangana regions of the State. It was decided by the Committee that the quorum for the meeting should be three including the Chairman.

The Chairman requested the members to examine the existing systems of taxation, carefully, to make any far reaching and practical recommendations in conformity with the principles of simplicity, uniformity and equity. He emphasised that the ability of the ryot to bear the assessment should be an important consideration and that would depend upon the cost of cultivation, and the net profit realised by the ryots.

In order to have a comparative idea of the systems of settlement followed in both the regions of the State and to issue a questionnaire to the public and elicit their opinion in the matter, the Committee decided to undertake a preliminary tour in two or three districts in each region. The Committee toured in the following districts before issuing the questionnaire.

District	*From*	*To*
Mahabubnagar	27–1–58	30–1–58
Kurnool	8–2–58	14–2–58
Nizamabad	27–2–58	4–3–58
East and West Godavaries	27–3–58	3–4–58

The places visited and witnesses examined are shown in Appendix 4.

3. After examining the systems of settlement in force, in both the regions of the State and also ascertaining the current problems relating to land taxation, irrigation and agriculture, in both the regions of the State, a questionnaire was issued (Appendix 2) in English, Telugu and Urdu, for eliciting the information relevant

to our enquiry. Besides giving wide publicity through press, the questionnaire was sent to all persons, institutions and associations interested in evolving a rationalised system, common to both the regions, for the levy of land revenue assessment and charges for irrigation. 6,080 copies of the questionnaire were issued in the three languages. The officials, non-officials, institutions and Associations to whom the questionnaire were sent were requested to return the questionnaire with answers, as adequate space was provided in the questionnaire books to record answers. The last date for the receipt of the replies was originally fixed as 15-6-58, but it was later extended to 30-6-1958 on the receipt of representations from the M.L.As. and the Public.

4. In all 872 questionnaires were received with replies, from non-officials, officials, Associations and institutions. A statement analysing the Persons, the Institution or Association from whom replies to questionnaires have been received, in each district, is given in Appendix 3. Among all the Committees formed by the Governments of Madras, Andhra and Hyderabad, it may be said, that this Committee received the largest number of answers to the questionnaire. This also reveals the interest which the public evinced in the work of the Committee.

5. After receiving the replies to the questionnaire, the Committee undertook a further tour in the districts of Chittoor, Nellore, Hyderabad and Guntur to elicit further information and clarification from the public and persons who sent replies. The places visited and the number of witnesses examined, in the tours, are given in Appendix 4. In all, 37 days were spent on tour, 4,087 miles travelled and enquiries made at 66 places. The Committee had 58 sittings at headquarters.

6. A list of books referred to by the Committee is also given in the Bibliography in Appendix 27.

7. We thank the Government for the instructions given by them in G.O.Ms. No. 2417, Revenue Department, dated 23-12-1957 to the Board and all the Collectors to supply the information required by us. The Director of Agriculture, the Director of the Bureau of Economics and Statistics, the Director of Settlements, the Director of Animal Husbandry and Fisheries. The Registrar of Co-operative Societies and the Chief Conservator of Forests willingly supplied the information required by us. We also place on record our thanks to all the officials and non-officials who sent with replies the copies of the questionnaire and enlightened us in our tours. The cultivators who attended the enquiries made by us at different places had to undertake long journeys spending probably considerable amounts. We are grateful to all of them for their co-operation. We appreciate

the co-operation extended to us by the Inspector-General of Police by deputing the police reporters to work with us from time to time. We also appreciate the help rendered by the Planning and Development Department of the Government, Board of Revenue, Special Chief Engineer for Irrigation, Director of Agriculture, Director of Animal Husbandry and Fisheries, the Special Collector, Nagarjunasagar Project and other district officials by placing their vehicles at our disposal, for use in our tours outside Hyderabad.

We have great pleasure in acknowledging the very valuable help we have received from the Secretary of our Committee Sri D. Basava Raju, I.A.S., and both the Deputy Collectors, Sri Mohd. Mazharul Huq, and Sri M. Satyanarayana who assisted him. We wish to place on record the work of the staff who discharged their duties very efficiently and with enthusiasm.

CHAPTER II

History of Andhra Pradesh

1. The Andhras are an ancient race well known even from the prehistoric and early historic periods. The disintegration of the Vijayanagar Empire commenced in the 16th Century A.D. after the Battle of Thalikota in 1565 A.D. In the struggle for national independence, Andhra leaders played an important role and after attaining Independence they were able to form the first Linguistic State of their own in 1953 which later expanded in 1956 by the merger of the Telangana region of the erstwhile Hyderabad State. Telugu which is the language of the Andhras is the third largest spoken language in India.

2. A mention is made of Andhras in the Aitareya Brahmana of the Rig Veda period. The Andhras inhabited the land south of the Vindhyas at that time. At the time of Chandragupta Maurya, the Andhra Kings ruled in the South. They had a big Army and a number of Forts. In the edicts of Asoka, mention is made of Andhras. Later the Satavahana dynasty attained political power. The founder of this dynasty, Simukha, established his kingdom in 225 B.C. at Dhanyakataka (Amaravati) on the southern bank of the river Krishna. The dynasty flourished for nearly 450 years. Their empire extended to the Arabian Sea in the West and included in it, the modern Hyderabad State which was then known as Vidarbha. The Satavahanas became so powerful that they invaded Magadha and conquered Pataliputra. The most famous amongst these rulers was Gauthamiputra Satakarni who extended the empire over the Maharashtra, North Konkan, Gujarat, Kathiawar and Malwa.

3. The rule of the Satavahanas ended early in the third century A.D. They were followed by the Pallavas who ruled over the area extending to Bellary, Amaravati and Kanchipura. The Ikshavakus, who were feudatories of the Satavahanas, became independent and ruled over the tracts around the Krishna and the Godavari, with their capital at Vijayapuri in the Nagarjunakonda valley. The Brihatpalayans ruled over the area around Masulipatam. The Salankayanas had their capital at Vengi near Eluru. Later the Vishnukundins ruled from 260 to 610 A.D. with their capital at Lenduluru (Denduluru) near Vengi. One of the Pallava rulers, Mahendravarman, was defeated in a battle with the Chalukya ruler Pulakesi-II, and fled to Kanchipuram.

4. With the victory of Pulakesi-II over Mahendravarman in 615 A.D. the rule of the Chalukyas was established around Vengipura. They had two branches, the Western and Eastern Chalukyas. One of the Eastern Chalukyan kings left Vengi and built another capital on the northern bank of the Godavari at Rajahmahendravaram.

5. The great Telugu epic, Mahabharata, written by the famous poets Nannaya and Thikkana was dedicated to Raja Raja Narendra, one of the Eastern Chalukya kings who ruled from 1022 to 1063 A.D. at Rajahmahendravaram. His son who was also a grandson of a Chola king, ascended the Chola throne at Tanjore and became the famous Kulottunga Chola.

6. Another dynasty which rose to power in the area between the Mahanadi and the Godavari was that of the Eastern Gangas, Anantavarma Choda Gangadeva reigned for over 60 years, conquered Utkala and transferred his capital from Mukhilingam to Cuttack.

7. *The Kakatiyas.*—After the fall of Chalukyas, the Kakatiyas of Warangal came into prominence and continued for two and a half centuries. Trade and Commerce flourished during the period. The rulers were great patrons of fine arts and literature. The Kakatiyas were subdued by the Mohamedan Rulers in 1323 A.D. but they could not subjugate the Andhra people. Reddi kingdoms were established around the Krishna, while the Hindu Empire of Vijayanagara was established on the banks of Tungabhadra at Hampi. The Bahmani kingdom was established in 1347 A.D. by Allauddin Hasan Shah Gangu Bahmani. There were frequent wars between the Emperors of Vijayanagar and the Sultans of the Bahmani kingdom. The most famous among the Vijayanagar emperors was Krishnadevaraya who ruled from 1509 to 1530 A.D. During his time, the political power as well as the literary talents of the Andhras were shining "like the midday Sun". At the battle

of Talikota fought in 1565 A.D. the united force of the Mohammaden rulers of the Deccan defeated and slew Ramaraya, the Vijayanagara ruler and destroyed the city of Hampi. The survivors of the Vijayanagara dynasty continued to rule over a progressively diminishing empire from different places. One of the more prominent among these was Venkatapatiraya who ruled from Chandragiri. The Mohammedan rulers of Golkonda occupied large areas of Andhradesa. The British and the French established their power in the South. With this, the power of the Andhra rulers vanished.

8. The Golkonda kingdom which was established by Sultan Kuli Kutb-ul-Mulk, a Governor under the Bahmanis who declared his independence was ruled by the Kutb-Shahi dynasty from 1512 to 1687 A.D. Shah Abbas, the king of Persia, sent an Ambassador to Hyderabad in 1603 A.D. with valuable presents. Shah Jahan, after rebelling against his father, fled from Burhanpur and was welcomed at Golkonda by Abdulla Kutb Shah. After ascending the throne, Shah Jahan sent a Firman or Khutba to Golkonda, where it was read in the name of the emperor in the chief mosque and coins were struck in his name. Aurangazeb invaded and plundered Golkonda in 1655 A.D., Abdullah sued for peace and got back his kingdom. In 1674 A.D. Abduallah was succeeded by his nephew, Abdul Hasan, more popularly known as Tana Shah. In his reign, occurred the famous episode of Gopanna or Ramadas of Bhadrachalam. Aurangazeb reconquered Golkonda in 1687 A.D. and imprisoned Tana Shah at Daulatabad where he died in 1704. Thus ended the Kutb Shahi kingdom of Golkonda, which became a part of the Moghul empire.

सत्यमेव जयते

9. *The Asaf Jahis.*—Asaf Jah, a general of Aurungazeb, who was appointed Subedar of the Deccan in 1713 A.D. with the title of Nizam-ul-Mulk, asserted his independence and founded the Asaf Jahi dynasty, with its capital at Hyderabad. After his death, Nasir Jung, his second son and Muzaffar Jung, his grandson by one of his daughters, fought for the succession and they were supported by the English and the French respectively. After a series of battles Salabat Jung became the Nizam. He gave four districts known as the Northern Circars to the French but the English soon conquered them from the French. There was a fresh treaty between the Nizam and the British in 1800 A.D. by which the subsidiary force assigned to the Nizam's service was augmented and in return for it, the Nizam ceded to the British the territories now known as the Ceded districts. Thus the area comprising the eleven districts of the former Andhra State were annexed administratively to the Madras State and continued in it, till October 1, 1953 when Andhra State was formed. Nine Telugu districts known as Telangana remained in Hyderabad State.

10. The State of Andhra the tenth A class State in the Union of India and the first linguistic State since Independence came into being on the 1st October, 1953. Subsequently, as a result of the States Reorganisation Act, the Telugu parts of Hyderabad along with Andhra State came to be formed into Andhra Pradesh on 1-11-1956.

11. *Physical Features.*—Andhra Pradesh is the fourth largest State in India with an area of 1,10,250 sq. miles and a population of 3.22 crores. It has a long coast line of 540 miles along the Bay of Bengal.

12. The State lies between latitude 15° and 20° N. and longitude 78° and 85° E. Extending over part of the Deccan Plateau and the Eastern coast land the terrain of the State is generally sloping from the West to the fertile plains on the East coast. It has ports at Barua, Calingapatnam, Bhimunipatnam, Kakinada, Masulipatam and a natural harbour at Visakhapatnam.

13. The highest peak in the State is Galikonda in Vizag district near Anantagiri. The largest river flowing through the State is the Godavari which has a total length of 870 miles having its catchment in the western-ghats, south of Vindhyas, Eastern Ghats and the Deccan plateau. Next comes the Krishna.

14. Rainfall varies from region to region. The maximum is in the East Godavari district, being 55 inches. The minimum is in Anantapur being 22 inches. The south-west Monsoon commences in June and ends in September, and the north-east monsoon brings rain to the coastal districts and the southern districts from October to December. Both the monsoons are active on the eastern portion of the State. The Ceded districts and the western belt of Telangana receive inadequate rain as they are situated practically at the tail-end of the zones benefitted by either monsoon. During the north-east monsoon, the east coast suffers from cyclones and floods.

15. *Climate.*—The summer is rather severe in Vijayawada, Guntur, Khammam and Sirpur. In Bhadrachalam the temperature sometimes shoots up to 126° F. The winter is pleasant all over the state. Waltair and Madanapalli are the summer and health resorts in the State.

16. *Hills and Forests.*—On account of the gradual slope of the country to the east and on account of the rich silt carried by the several rivers, the coastal districtsare rich and fertile. There are thick forests on and along the eastern ghats and in the Nallamalais of Kurnool district. The forests in the north and east of the State form part of the Dandakaranya of the Ramayana fame.

17. *Agency.*—Tribal people like Koyas, Savaras, Cadabas and Gonds live in these forests which produce teak, and other timber trees and bamboo. In the East Godavari district there are the Papi and Bhadrachalam hills in the Agency areas inhabited by tribal people and contain thick forests. In East Godavari there are three plains taluks where there are no hills. These are Ramachandrapuram, Amalapuram and Kakinada. In the first of these taluks, almost every inch of land is cultivated, crops growing even adjacent to the walls of houses in villages.

18. In the West Godavari district there are hillocks near Kovvur and Dwarka Tirumala. Chintalapudi and Kovvur are the dry taluks, in the district. The rest are wet and the main crop is rice.

19. In the Krishna district, there are hills in and around Vijayawada. In Guntur district, there are Canikonda, Nagarjunakonda, Bellamkonda, Kondavidu, Kotappakonda, Vinukonda, Chimakurthi, Mangalagiri, Sitanagaram and Undavalli hills.

20. There are thick forests in the Nirmal or Satmala range of hills in Adilabad district. The bamboo grown in this district is used for the manufacture of paper in the Sirpur Paper Mills.

21. The North Balaghat range stretches into Vikarabad area in Medak district as Anantagiri hills, while the South Balaghat range or the Golconda watershed runs from Ashti in Bhir district of Bombay to Nalgonda in south-western and south-eastern directions. This range passes through the districts of Hyderabad, Mahabubnagar and Nalgonda. In the last mentioned district there are other hills like Devarkonda and Bhongir.

22. Along the river Godavari on its banks in Adilabad, Karimnagar, Warangal, Khammam, East and West Godavari districts there are extensive forests which, besides timber and other usual forest products, yields bamboo which is floated down the Godavari to Rajahmundry. It is used not only in house construction but also in the Andhra Paper Mills.

23. Sandal, teak, shisham, ebony, mahua, nallamaddi, regu and sandra are some of the timber species grown in these forests. The scrub jungle regions in Mahbubnagar, Hyderabad, Nalgonda and Medak districts, have mostly stunted trees like Seethaphal and Jungli Anar and toddy palms. Some of the grasses like Rusa grass in Nizamabad district yield fragrant oils. Spear and Koorpri grasses found in Adilabad district yield valuable fibres for making paper.

24. Besides timber and firewood, these forests yield honey, lac, gums, bark for tanning, wax, canes and medicinal herbs. Indigenous vegetable dyes for dyeing cloth and toys are prepared from some types of wood available in the forest.

25. The Cuddapah district has Seshachalam and Palakondalu. In Kurnool district there is the Nallamala Range which is 70 miles long and 25 miles broad, and has a height of 3,000 feet. The highest peak in the range, Bairenikonda, is 3,150 feet high.

26. In the centre of Anantapur district there are the Penugonda hills which are 3,091 feet high, Madakasira and Mallappa hills.

27. North-west of Madanapalli in Chittoor district is the Horsley Hill which is 4,100 feet above sea level. There is another Hill called Enuga Ellamma hill. According to the local legend one Ellamma who lived, on the hill, a long time back used to feed elephants. There is a plateau in the District, comprising the Kuppam, Palmaneru, Punganur, Madanapalli and Vayalpadu taluks. Adjacent to the plateau are the Avulapalli hills which join the Tirupati Venkateswara Hills in Chandragiri taluk. Kalahasti and Karvetinagar are in a hilly area. In all the big hills there are passes, of which the more well-known are Mamandur, Kallur, Mogali Sainagunta Passes. There are forests in Avulapalli and Tirupati Hills.

28. In the hill regions generally, a large variety of wild animals like tigers and leopards are found. Perhaps next to Mysore State, Andhra Pradesh contains greatest variety of wild animals and birds. Bison are found in the thick jungle around Pakhal lake in Warangal district; four-horned antelope, hogs, deer and ravine deer or gazelle are found in highlands in different parts of the State; wild hogs are plenty in the jungles. Other animals found are bears, hyenas, wolves, tiger, and leopards. Among birds of interest are snipe, painted partridge, blue rock and green pigeon, sandgrouse, quail, bustard, peafowl, jungle-fowl, wild duck, wild geese and teal. On the banks of the big rivers are sometimes seen the florican and the flamingo. There are no elephants in any of the forests in this State.

29. *Rivers.*—The biggest river that flows through the State, the Godavari, has its origin at Triambak hills near Nasik in the Western Ghats and runs through the districts of Nizamabad, Adilabad, Karimnagar, Warangal, Khammamet, East Godavari and West Godavari. The Godavari Basin has a catchment of 1,19,926 sq. miles in Bombay, Orissa, Andhra Pradesh and Madhya Pradesh. At Kaleswar, the biggest tributary Pranhita joins it. At Kunavaram it takes in the tributary Sabari. There is an anicut

across the Godavari at Khanapur and Dummigudem. The river flows through a gorge in the Papi Hills, and later widens and forms several islands. At Dowleswaram, an anicut four miles long has been built across the river in 1852. In its final stage the river splits into two arms and joins the Sea in seven branches, known as the Sapta Godavari. The Godavari irrigation system is one of the biggest in the country. The river and its canal system provide navigation and irrigation.

30. The Krishna, which is 800 miles long, rises near Mahabaleswar in the Western Ghats, and flows through the Sholapur and Raichur Doabs. It passes Srisailam where it is known as Patalaganga. Then the river flows through the valley of the Nallamala hills, passes Nagarjunakonda and Eleshwaram, and Nandikonda village near the site of the Nagarjunasagar dam, and running further east, passes by Muktyala, Dhanyakataka-Amaravati an ancient Andhra capital—Vijayawada, and after flowing another 40 miles east, joins the Bay of Bengal. Through a net work of canals, taking off from the Krishna barrage at Vijayawada it provides irrigation as well as transport facilities over an extensive area

31. The Tungabhadra, as it is called after the confluence of the twin rivers Tunga and Bhadra, which rise in the Western Ghats at gangamula on the northern border of Mysore State, joins the Krishna at Sangameswar in Kurnool. The Tungabhadra Project provides the much-needed irrigation facilities in Rayalaseema.

32. The Pennar or Pinakini rises in Nandidrug hills in Mysore State, flows through Anantapur and Cuddapah districts, and enters the Nellore district through the Somasila pass in Western Veligondalu. It flows all through the length of Atmakur taluq, takes in Boggeru and Biraperu, runs as the boundary between Nellore and Kovvur taluks and falls in the sea. In the Pennar Delta, paddy is grown in extensive areas. There are two anicuts—the Sangam and Nellore diverting water to three big reservoirs and a series of tanks.

33. The river Pranhita, formed by the confluence of the Wardha, the Penganga and the Wainganga which rise in the Satpura hills in Madhya Pradesh, flows along the eastern border of Adilabad district and joins the Godavari near Kaleswar in Karimnagar district.

34. The Manjira has its source in the Balaghat Range in Patoda, Bhir district. It forms the boundary between Nizamabad and Nanded districts and discharges its waters into the Godavari near Sangam in Nizamabad district. Across this river is built the Nizamsagar dam designed to irrigate 2.5 lakhs of acres.

35. The Manair, 80 miles long, has its origin in the Sirsilla Hills in Karimnagar district and as it flows through isolated hills and stony wastes numerous streams join it on either side. Karimnagar town is on the northern bank of this river. It joins the Godavari near Mahadevpur in the same district.

36. The Dindi river or the Dandivagu also known as Meenambaram, 95 miles long, emerges from the Shahabad Hills in Mahbubnagar district, flows south through Amrabad and Nandikonda Hills and joins the Krishna south of Yeleshwaram. A small project across the stream provides irrigation facilities for fourteen villages in Nalgonda district.

37. The Musi, 157 miles long, rises in Anantagiri hills and flows through the districts of Hyderabad and Nalgonda. Its upper course for about sixty miles is through a hard bed of granite boulders. It enters the Osmansagar near Hyderabad city where a dam has been constructed for controlling floods and supplying drinking water to Hyderabad City. The Musi takes in the Aler stream near Chittur and joins the Krishna near Vadapalli in Nalgonda district. Hyderabad, capital of Andhra Pradesh is on the banks of the Musi.

38. The Paler, which is 92 miles long, rises near Ghanapur in Nalgonda district, and running as the boundary between Nalgonda and Khammamet districts, joins the Krishna south of Jaggayyapet. The Paler Project provides irrigation to 13,000 acres in Khammam district.

39. Similarly, the reservoir on the Wyra river in Khammam district irrigates 13,000 acres. The Wyra river later falls into Muner which is a tributary to Krishna.

40. The 120-mile long Munneru has its source in Pakhal tank in Warangal district and joins the Krishna in Nandigama taluk of Krishna district.

41. There are many small rivers flowing through the Visakhapatnam district. The Bahuda rises in Peddakimidi Maliahs and joins the sea at some distance from Ichchapuram. The Mahendratanaya rises in the Mahendra Hills and flows into the Sea at Barua. There is another Mahendratanaya which rises in the same hills and joins the Vamsadhara in Pathapatnam taluk.

42. The Vamsadhara which emerges as a stream from bamboo bushes, as its name indicates, in Nimmagiri hills, passes south through Gunupuram taluq and then running east, joins the Sea at Kalingapatnam. Many open-mouth river channels taking off

from this river irrigate large extents of land in Srikakulam district. Nagavali or Longulya, which is 115 miles long, has tributaries like Swarnamukhi, Vegavati and Kumbhikotagadda. Rising in Nimmagiri hills, it flows southwards through Parvatipuram and Palakonda taluqs and joins the Sea at Mofas Bandar. It is proposed to construct an irrigation project across the Vamsadhara.

43. The Champavati rises in the Andhra hills in Salur taluq, passes through Vijayanagaram and Bhimunipatnam taluqs and joins the Sea at Konada.

44. The Gosthani flows through stones resembling the teats of cow, from Kasipuram hills in Sringavarapukota taluq, and through the Bhimunipatnam taluq and joins the Sea at Bhimunipatnam.

45. The Sarada, 45 miles long, rises in Madugula Hills in Viravalli taluq, passes through Anakapalli and Yellamanchili taluqs, and joins the Sea at Vakada.

46. The Varaha rises in Golugonda and flows through Yellamanchili taluq and joins the Sea at Vakada.

47. The Thandava river also rises in Golugonda Hill and flowing as the border between the Visakhapatnam and East Godavari districts, joins the Sea at Pentakota.

48. The Yeleru in East Godavari irrigates about 60 thousand acres with channels taking off from it.

49. In the Krishna District, the Budameru creates a drainage problem every year during floods. The construction of a diversion work is in progress now.

50. The Palar rising from Nandi Hills in Mysore flows through the Chittoor district.

51. In the Chittoor and Nellore districts there is the River Suvarnamukhi.

52. The Kondakarla Ava, near village Kondakarla in Sarvasidhi taluq, is a vast perennial lake and thousands of water birds live there. It receives water from the Sarada river through a big canal. It is a centre of boat recreation. The Komaravolu Ava, a branch of Varaha river in Golugonda taluq joins this 'Ava'.

53. The Kolleru in West Godavari district, is a natural depression, being the only large natural fresh water reservoir along the Andhra coast line. It is a large shallow depression, roughly elliptical in shape, and was originally a part of the Bay of Bengal. It is

half-lake and half-swamp. It also receives the drainage from the canal systems of both the Godavari and the Krishna. The lake being connected to the Sea and liable to tidal action would be brackish but three big streams flowing into it make the water sweet and silt which they bring in is rapidly filling it up. The extent of the Kolleru lake varies greatly during the different seasons of the year. During the monsoon it exceeds 100 sq. miles but in the dry season it shrinks considerably and sometimes as in the drought of 1900 the lake became bone-dry. Reclamation, widening and improving the drain are also gradually reducing its extent.

54. The Kolleru is well stocked with fish and abounds in water fowl of every description. A regular export trade in birds and skins existed at one time but the birds were so mercilessly pursued that they have greatly declined in numbers.

55. In the lake are many fertile and highly cultivated islands which are included in 26 villages.

56. The Pakhal, Ramappa and Lakhnavaram lakes in Warangal district are big sources of irrigation in Telengana. The Andhra Pradesh State has been aptly described as a "River State" with unlimited possibilities of irrigation.

57. *Administrative Units.*—There are 20 districts in the State with 183 taluqs and 1,000 revenue firkas or circles. There are 293 towns and cities and 26,450 villages in the State.

58. *Population.*—The State has a population of 3,12,60,135 consisting of 1,57,42,912 males and 1,55,17,221 females. The total rural population of the State is 2,58,12,679 or 82.6 per cent of the total population. The population depending on agriculture is 2,10,40,324 or 67.3% of the total population. Scheduled Castes in the State constitute 14.63% of the population whereas there are about 7.67 lakhs of tribals forming 2.45% of the population.

59. The Classifictaion of the population by livelihood Classes is as follows :—

Particulars	Population in thousands
Population depending for livelihood on—	
1. Agricultural sources:	21,040
(*a*) Cultivation of owned land	12,238
(*b*) Cultivation of unowned land	2,413
(*c*) Agricultural labour	5,755
(*d*) Renters (Agriculture)	634
2. Non-agricultural sources :	10,220
(*a*) Occupation other than cultivation	3,974
(*b*) Commerce	1,695
(*c*) Transport	448
(*d*) Other services	4,103
Total	31,260

60. *Land Utilisation.*—The major occupation of the people in the State is agriculture which provides livelihood for over 210.4 lakhs of population. The per-capita average of the area sown works out to 1.29 acres as compared to 1.26 acres for All India.

61. The total cropped area in the State is 2,70,22,000 acres or 14.4 per cent of the total geographical area. The table below will give the classification of the land according to its utilisation.

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	Particulars	Area in lakhs of acres
1.	Total geographical area (according to village papers).	664.32
2.	Forests	140.26(21.1)
3.	Barren and uncultivable land	72.38(10.8)
4.	Land put to non-agricultural use	33.33(5.0)
5.	Cultivable waste	41.09(6.2)
6.	Permanent pastures and other grazing lands	28.78(4.3)
7.	Land under miscellaneous crops, tress and groves not included in the net area sown	6.23(0.9)
8.	Current fallows	54.88(8.3)
9.	Other fallow land	17.38(2.6)
10.	Net area sown	270.22(40.6)
11.	Area sown more than once	23.81
12.	Total cropped area	293.81

NOTE.—Figures in brackets indicate the percentage to the total geographical area.

62. *Soils.*—The principal soils of Andhra Pradesh are as follows :

1. The fertile alluvial soils at the mouths of the rivers on the coast.
2. The Deccan-trap consisting of fine Black soils.
3. Red ferruginous soils.
4. The arenaceous soils consisting of sand on the Sea coast.

63. *Sources of Irrigation.*—Andhra Pradesh has relatively better irrigation facilities than many other States in India. The net irrigated area in the State in 1955-56 was about 66.8 lakhs of acres which constituted about 24.7 per cent of the net area sown. Canals command 46.5 per cent of the irrigated area whereas tanks accounted for 38.4 per cent of the area. Canal irrigation is predominant in the districts of East Godavari, West Godavari, Krishna, Guntur and Nellore and these together accounted for about 22 lakhs of acres or 71 per cent of the area irrigated by canals. The area irrigated by different sources are given in the following table:—

Sources of irrigation	Area in lakhs of acres
1. Net area irrigated by	
(*a*) Canals	31.02(46.5)
(*b*) Tanks	25.67(38.4)
(*c*) Wells	7.54(3.8)
(*d*) Others	2.54(3.8)
2. Area irrigated more than once	11.57
3. Gross irrigated area	78.34
4. Percentage of net irrigated area to net area sown .	24. 7

NOTE.—Figures in the brackets indicate the percentage of the net are irrigated.

64.—*Land Holdings.*—The total number of holdings in Andhra Pradesh is 43,66,272 comprising an area of 3,40,43,220 acres. The average size of a holding is about 7.8 acres. The census revealed 39.89 lakh holdings are under the personal cultivation of the owners and that they include lands put to non-agricultural uses.

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65. *Crop-Pattern and Production.*—The principal crops grown in the State and the percentage of the total cropped area occupied by each and the average yields are shown below for the year 1955-56.

66. 63.2 per cent of the total cropped area in 1955-56 was under cereals, 10.9% under pulses, and 16.0% under oil seeds. Amongst other principal cash crops, cotton accounted for 3.4% of the total cropped area, groundnut 10.4, tobacco 1.3 per cent, chillies 1.4% and sugarcane 0.6 per cent. The area under principal crops and their production during 1955-56 are given below :

Name of the crop	Area in acres	Percentage	Production (1955-56 estimates)
FOOD CROPS :			
1. Paddy	71,04,000	23.6%	2,907,530 tons
2. Other Cereals ..	1,60,93,530	39.6%	2,113,470 tons
3. Pulses	32,56,257	10.9%	246,000 „
4. Sugarcane	1,74,963	0.6%	..
5. Chillies	4,35,899	1.4%	101,000
6. Fruits and vegetables ..	3,78,860	1.2%	..
7. Other food crops ..	3,55,898	1.2%	
	2,33,99,407	78.5%	
NON-FOOD CROPS :			
1. Cotton	10,05,442	3.4%	133,000
2. Groundnut	30,54,174	10.4%	..
3. Tobacco	3,94,857	1.3%	
4. Cocoanut	88,019	0.3%	
5. Castor	8,56,150	2.8%	
6. Gingelly	6,67,488	2.3%	
7. Fodder crops ..	3,03,587	1.0%	
	63,79,726	21.5%	

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67. Food crops occupy nearly (2,33,99,407) acres or 78.5% of the total cropped area. The most important food crop of the State is white paddy and this occupies 71,04,000 acres *i.e.* 22.1 per cent of the total area under all crops.

68. Millets come next in order of importance with an estimated output of 21,13,470 tons of which the entire quantity is consumed in the State leaving no exportable surplus. A considerable area is under pulses, and the production is not sufficient for local consumption.

69. Sugarcane is an important cash crop of the State. The estimated average production of Jaggery in the State, is about 5,28,046 tons. As the consumption in the State is only 4,12,846 tons there is an exportable surplus of 1,15,200 tons. The other crops with exportable surpluses are groundnut, chillies, tobacco, onions, turmeric and fruits like mango, banana and citrus.

70. Details of the production, local consumption, and exportable surpluses in the case of each of these non-food crops are given below :—

Name of the commodity	Average production (tons)	Requirements for the State (tons)	Exportable surplus (tons)
1. Groundnut	1,07,01,120	97,61,270	93,400
2. Tobacco	1,31,100	49,900	81,200
3. Chillies	1,10,490	1,03,651	6,839
4. Onions	1,70,532	1,26,532	44,000
5. Turmeric	64,497	54,497	10,000
6. Coconut (number) ..	233 millions	183 millions	50 millions
7. Castor	62,426	40,106	22,320 tons
8. Cotton (raw) ..	1,35,400 bales of (392) lb. each)	29,493 bales	1,05,457 bales of cotton raw.
1. Mango	Exportable surplus	1,83,000	tons.
2. Banana	„	22,900	
3. Citrus	„	11,650	

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The State has reached self sufficiency in the matter of food production and has exportable surplus in the order of Five lakhs tons of rice per annum.

71. *Minerals.*—The State is rich in minerals. At present, it is the principal supplier of Coal to South India. The State accounts for all the production of Barytes and more than half the output of Asbestos in the country comes from this State. Manganese and Mica production account for about 12 and 11 per cent respectively of the total production in the country. It has Iron ore, Steatite, Graphite, Felspar and Chromite also. Nearly 12 per cent of the Gountry's Craphite and 30 per cent of Felspar is produced in Andhra Pradesh. The potentialities for increased mineral production are great and will improve after a systematic and detailed exploration of the area.

72. *Industry.*—The principal industries of Andhra Pradesh are Cotton-Textiles, Jute, Sugar, Paper, Cement and Cigarettes besides Rice-milling and Vegetable oil production. Over 23 millions lb. of cotton yarn and 42 million yards of cotton cloth valued at about 71 million rupees were produced during 1955. The sugar production in the State was of the order of 118 thousand tons valued at 74 million rupees. 15 thousand tons of paper was produced with an estimated value of 18 million rupees. The quantity of cement produced in the State was 203,901 tons costing Rs. 17 millions. 35 million rupees worth of cigarettes were also produced in the State. 285 million k.w. of electricity was generated in the State during the year 1956.

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73. *Cottage Industries.*—Among the important cottage and small scale industries, handloom industry occupies the pride of place with about four lakhs of handlooms at work in the State as a whole. In addition, there are 14,000 looms for woollen fabrics. On the whole the State has the largest number of looms in India providing employment for about 3.23 lakhs of persons and livelihood for 16.15 lakhs of persons. Other important cottage industries are kambli weaving, coir making, basket making, etc. The State is noted for its handicrafts which have an international market. Notable amongst these are the silver filigree articles of Karimnagar, the exquisite toys of Nirmal, Kondapalli, Nakkapalli and Tirupati the carpets of Warangal and Eluru and lace goods of Narsapur.

74. *Transport and Communications.*—The total railway route mileage in Andhra Pradesh is 2,902 miles out of which 1,633 miles are by Broad gauge, 1,244 miles meter gauge and 25 miles narrow gauge. The State has 1,409 miles of National Highways, 2,072 miles of State Highways, 8,527 miles of major district roads and 3,458 miles of other district roads. There were 20,232 motor

vehicles in the State in 1955-56 of which 9,180 were motor cars, 5,567 lorries, 216 taxies, 3,384 motor-cycles, 1,801 buses and 84 other vehicles. The Road Transport Department of the State owned a fleet of 442 buses in 1956 with a gross earnings of Rs. 1.80 crores. Over 47 million passengers were carried during the year 1955-56. There were during 1953-54—5,905 post and telegraph offices in the State. The existing facilities of communication are inadequate.

75. *Literacy and Education.*—Only 13.1 per cent of the population are literate in the State as against the All-India average of 16.6 per cent. There are about 28,000 schools and 47 colleges besides 31 professional Colleges in the State.

76. *Medical facilities.*—There are 776 hospitals and dispensaries in the State—183 in urban areas and 593 in rural areas with a total bed strength of 16,128. The number of doctors, nurses and midwives in the State are 923, 1,224 and 538 respectively.

77. *National Income.*—The National Income of Andhra Pradesh is provisionally estimated at Rs. 823-10 crores, in 1955-56 as against Rs. 691.47 crores in 1950-51 thus indicating an increase of 19 per cent. Likewise, the per capita income has risen from Rs. 221 in 1950-51 to Rs. 249 in 1955-56. The estimates of National incomes of Andhra Pradesh under different items of production and services will be found in the following table. Agriculture and small enterprises which are the principal means of livelihood of a very large section of the population account for about Rs. 557 crores or 68 per cent of the total income. The income from organised industry (mining and factory establishment) accounts for Rs. 29 crores or 3.5 per cent and income from Commerce, Transport and Communications accounts for Rs.129 crores or 15.7% of this total income. Income from other services constitute Rs. 108 crores or 13 per cent of the National Income of the State.

ESTIMATES OF NATIONAL INCOME FOR ANDHRA PRADESH

(Provisional)

	Rs. in crores 1950-51	 1955-56
1. Agriculture and Animal Husbandry ..	411.77	474.44
2. Mining, Manufacturing and Hand trades	85.79	111.75
(*a*) Mining	2.51	5.68
(*b*) Factory Establishment	14.75	23.47
(*c*) Small enterprise	68.53	82.60
3. Commerce, Transport and Communications. ..	106.81	129.33
4. Other services		
(*a*) Professional and liberal arts ..	27.82	33.53
(*b*) Govt. services (administration) ..	17.32	24.05
(*c*) Domestic services	4.12	4.97
(*d*) House property	37.84	45.03
Total income ..	691.47	823.10
Population (*in lakhs*) ..	313	331
Per capita income ..	221	249

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78. *Tourist Centres.*—The tourist centres in Andhra can be classified into two broad categories, namely, the centres of interest to foreign tourists and the pilgrim centres. Amaravati, Tirupati, Kalahasti, Srisailam, Ahobilam, Mangalagiri, Sinhachalam, Chandragiri and Tiruttani are a few of the many pilgrim centres of the State. The Nagarjunasagar Project and the Machkund Project sites are some of the tourist centres of all India importance.

Land and its tenures in other Countries and States

In India, we have the longest record of a highly organised and vast agricultural population and it would be worse than folly to ignore that experience—experience with its successes and failures. Agricultural production, is the winning of wealth from land by means of labour. Land is an essential item in the economy of production and as such, it becomes a desirable asset and the system of land tenures becomes of primary importance. Land differs fundamentally from other forms of wealth as it is usually defined, but it is of prime importance for the conversion of inorganic into organic and in consequence, must be the ultimate factor controlling the development of the human race. Land, with air and water, form the inorganic, bases from which all organic and living matter derives its existence. It is the vegetable kingdom, which alone is capable of converting the inorganic, non-living, into the organic and the living. It is on the vegetable kingdom that all animals, man including, ultimately depend for their subsistence. Land is therefore one of the country's most important resources. Human nature being what it is, production, even of essentials to life will only be achieved if an attractive return is obtained for the labour involved and it is the system of land tenures which largely determines the distribution of rewards for agricultural labour.

2. Agriculture, therefore, continues to be the leading industry and the source of employment for a very large section of our population. Under the Hindu and Muslim rule, the ryot was recognised as the owner and proprietor of the soil. The person who first reclaimed and cultivated the land was considered to be the proprietor thereof. According to Manu "cultivated land is the property of him, who cuts away the wood or who first clears and tills it." The king had only a right to levy tax on land by way of a share in the produce.

3. According to the Moslem Rulers in India from the 13th to 18th century, a kingdom had three essential constituents : the sovereign who ruled it, the army which supported the throne and the peasantry which paid for both. The relation subsisting between these entities is comprised in the pithy statement, "Troops and peasants are the two arms of the kingdom". In Moslem India as in India under the Hindu kings, the agrarian system was more a matter of duties rather than rights. It may thus be seen that assessment from land was the principal source of Revenue to the State from very ancient times.

4. In the history of Land Tenures, the question resolves itself into one of the rights of an alien authority which gains control or possession of a country by treaty, conquest or other means. In the earlier period of the world's history, the conqueror was the sole arbitrator in this matter, and his word was in effect, the Law. The conqueror was considered the sole owner of the soil, in the area conquered. The Normans, when they conquered England, adopted this view and distributed the land among themselves and their adherents, ignoring the rights of the conquered. The same is true of the conquests which followed the discovery of the new world; full possession of the land was taken by the conquerors;

and in the absence of amenable population willing to serve, such population was exterminated or absorbed. India and China alone form the exceptions to this rule, due to the magnitude of the problem involved.

5. *Historical Development of tenures in India.*—The King's share was usually 1/6th of the gross produce and in times of war, it was 1/4th. The Kings considered that it was their paramount duty to protect the ryots from enemies and marauders. The peasant considered that it was his sacred duty to give the King's share and his right to enjoy the King's protection. It must be admitted that in those ancient days when Kingdoms were small and often at war with each other, the kings found it a very arduous task to protect the agriculturists.

6. It is seen from the land systems in South India by K.M. Gupta that the Arthasastra gave an elaborate account of the territorial organisation for the collection of revenue. A gopa or circle officer was in charge of a number of villages, usually from five to ten in number. His duties were to classify the village-lands into different groups for the purpose of taxation, to register gifts sales, charities and remission of taxes regarding fields, and to keep all statistics connected with the village. There were Sthanikas, in charge of districts who also attended to revenue accounts. Both under the Chalukyas and Cholas there were elaborate administrative divisions for general administration and collection of revenue. There is a reference in the Jatakas about survey. The Mauryan Government had an elaborate survey of the land in its diverse aspects, so that the taxable capacity of each village was very accurately ascertained. The Jatakas made it clear that the King had a right to a portion of the income from land. The Arthasastra mentioned seven principal sources of income and six of them relate to land. Manu's canon of taxation is that the King should fix the taxes in such a way as would enable both the king and the tax-payer to receive their due reward. "As the leech, the calf and the bee take their food little by little, even so, must the king draw from his realm moderate annual taxes." Sukras's canon of taxation is that the king should realise his revenues in such a way that the cultivators are not destroyed. In other words, he should do so like the garland-maker, who does not destroy the flower plants, and not like the charcoal-maker, who destroys the tree.

7. However, oppressive taxation and the consequent desertion of villages seem to have been known in India from very early time, from the time of Jathakas. Severe measures were adopted even at the time of Cholas for the realisation of land revenue. During bad seasons, however, remissions were given by the Cholas and when villagers were rehabilitated there were progressive rules of taxation to encourage people to reclaim land.

8. At the beginning of the Moslem period, the local chiefs or Rais had most of the lands under them, dealing directly with the peasants and gave only a tribute to the Moslem ruler. As long as he was loyal and paid the tribute punctually, he was allowed to collect the share from the peasants in his own way. The Moslem Kings also assigned in lieu of cash payment for salaries for civil and military services, the revenue or rather the King's share of the produce in specified areas. Grants were also made as rewards and also for maintenance of charitable and religious institutions. These grants and assignments were held at the pleasure of the King who could terminate them at his will. The Hindu inhabitants were not generally dispossessed and only "Khiraj" or tribute was levied which in practice became the land revenue. The Moslem rulers considered that instead of sticking on to a uniform scale of 1/6th of the gross produce for all crops, a differential rate, making allowances for irrigation, was permissible. In practice, however, Allaudin, Sher Sha and Akbar followed the Hindu method of taking a share of the gross produce.

9. Firoze Sha undertook irrigation works on a considerable scale. In consultation with the Jurists, he claimed special irrigation revenue on the specific ground that the king was entitled to some return on the outlay. He abolished all miscellaneous cesses. During the early Moslem period, the chief stood between the peasants and the Government and it is not clear whether the peasants enjoyed the security of tenure which is now-a-days regarded as a primary condition.

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10. Sher Sha took an important step in dealing directly with the peasants. He gave them the choice of the basis on which demand should be made by measurement or sharing—and gave them written documents defining their tenure. For all staple crops, the lands were divided into good, middling and bad, the yields of all the three were added up, divided by three and the revenue demand was 1/3 of this average. Akbar succeeded to the throne in 1556 when he was only fourteen. The period of his personal rule began in 1562 and lasted until his death in 1605. For the first 24 years, his revenue administration may be said to be a series of experiments. After that, a stable system was evolved. Akbar superseded the farming system of collecting revenue, wherever possible, and endeavoured to settle it with the village communities. The amount to be paid by each village was calculated. At the same time, a statement of dues payable by each cultivator was also prepared for the guidance of the village authorities. There was a survey. The unit was a yard-rod-gaz of 41 fingers or 33 inches. Land was divided into three classes, Pulaj that was continuously cultivated, (2) Phirawati which required

a periodical fallow period, (3) Chicher which lay fallow for three or four years and (4) Banjar that lay fallow for four or five years. The first three kinds were again classed into best, middling and worst. The share of the Government was 1/3 of the produce and to ascertain the share on average Bigha of each kind was taken as a sample and 1/2 of the aggregate produce was considered to be the average. 1/3 of this gave the Government's share. The "Aini Akbari" contains tables of the average yield of various crops. The assessment under Akbar was less than that under the former Rulers but it was anticipated that it would be made up by increased punctuality of payments. Joint responsibility of the community was a condition on which the reduced rates and other advantages were accorded to the villagers. The community managed its own affairs and disposed of the waste. The Government, however, reserved the right to take land from those who would not cultivate, and give it to others. It must, however, be said that these arrangements were rather theoretical than practical and after a very short time, the old farming system re-established itself, all over the country. Aurangazeb issued Firmans which were directed to increase the cultivation and the welfare of the peasants. The Firmans throw interesting light on the system of assessment. Group assessment was almost the rule and the demand on individual peasants was fixed by the Headman. The burden of the strong fell on the weak. Cash payments were insisted. By Aurangazeb's time, the problem of absconding ryots had become a serious matter for the administration, and this was attributed by Bernier to the severity of the administration.

11. The Emperor issued two Firmans or general orders —the first in 1665-66 which was characterised by the prices and logical arrangements of Akbar's rules for Collectors. The second order was issued in 1668-69 with the specific object of ensuring that revenue was assessed and collected in accordance with the principles of Islamic Law. There is no provision for the dispossession of an inefficient or defaulting peasant as probably because there was a scarcity of peasants.

12. In the Deccan, one of the land marks in the agrarian history is the system of assessments introduced in Ahmed Nagar by Malik Amber. Malik Amber's demand was probably a cash demand fixed on the basis of cultivation. The Deccan was desolated by a great famine in 1630. There was an entire reorganisation of the land revenue system when it came under the Mughals. The officer who undertook this work was Murshid Quali Khan who introduced the measuring and sharing system in addition to the existing "Plough system". The system introduced was the "differential system". For crops depending on rain, the State took one half as its share for those under wells 1/3, and for high grade crops, like sugarcane etc., 1/4. The sagacious policy of Murshid Quali resulted in progressive increase of cultivation.

Vijayanagara Empire

13. *Survey and Settlement.*—As the land assessment or tax was the main source of the State's revenue, it was of the utmost importance to ascertain the exact extent of land each ryot held. The lands were carefully measured every year, the names of the holders, and the extent of their holdings were entered in registers. The instrument that was made use of in measuring lands was a bamboo pole whose length seems to have varied with the locality. The Kesari-patighada of 32 vitastis or 42 feet 8 inches was in use in the province of Kondavidu; the measuring pole of 32 padas referred to in the Nagulavaram grant of Krishnadevaraya appears to have been shorter in length than the above. Dore or doraghada is mentioned in several inscriptions of the Ceded districts; its length, however, is not known. A measuring rod called 'the manadanda, 18 padas in length' was in use in the Canarese districts. The 'standard rod' which was employed in the Chola country is mentioned in an epigraph of Tayanur. It is said to have measured 34 feet. There is reason to believe that there was a general survey of lands in the Canarese districts during the reign of Krishnadevaraya. Timmarusu's name is associated with the survey of certain Telugu districts. The names of other officers who surveyed the lands and settled the revenue are also preserved in the inscriptions. As it was customary to measure teh land and assess the revenue every year, no special significance need be attached to the survey conducted by the officers mentioned above.

14. The land in every village was divided into two main classes, the arable fields and the pastures. The former were further subdivided into 'Niraramba' and 'Kadaramba' fields. 'Niraramba' fields are defined as 'wet lands, lands irrigated artificially for rice cultivation'. This definition, however, is too narrow, as several crops other than rice must have been dependent upon artificial irrigation. In a "rayarekha" of the time of Vira Narasimha, a king of Vijayanagar fields in which sugarcane, betel, and kitchen vegetables were cultivated, were included in the 'niraramba' land. Similarly, the Kaifiyat of Sirivolla included in it fields in which all kinds of kitchen vegetables, fruit bearing trees, sugarcane, plantain, and betel creeper were cultivated. The niraramba lands were, therefore, divided in the "rayarekha" mentioned above into rice lands and gardens, the latter being further subdivided into sugarcane, betel, vegetable, and plantain gardens. The 'kadaramba' is said to mean 'dry land or land which depends entirely upon rain for watering ; the cultivation of such land'. All the dry crops such as Ragi, Cholam, Javari, and pulses might be described as 'kadaramba' crops. This minute classification of the village land was made for the purpose of assessing revenue. The arable fields seem to have been classified further into, 'best, middling, and inferior . And very probable taxes were assessed according to the yield of the crops.

15. It is not, however, possible to assert definitely the exact proportion of the produce which the several governments which ruled the areas in this State claimed as their share. Some writers believe that one-sixth of the produce was taken by the State as its due. The belief is based upon theorotical statements contained in the Dharma Sastras; but it does not seem to correspond to the real state of affairs obtaining in the 16th Century. According to some inscriptions the Government claimed 'muggoru' (one-third) and even 'sangoru' (half) from certain types of land. These terms are explained by the author of the Atthavana Tantram :

16. By "muggoru" it is meant an arrangement according to which the Government claim one-third of the produce, leaving the remaining two-thirds to the ryot. Similarly, by 'Sangoru' it is meant an arrangement by which the Government take half of the produce leaving the other half to the ryot". Again, in newly formed villages, and in the villages built after clearing the jungles and on ruined sites, the State's share of revenue varied with the time and place. It appears from this that no uniformity was observed regarding the proportion of the production which the Government claimed as the share due to them.

17. The measurement of lands, and several details pertaining to it were entered in palm leaf registers called 'kavilas'. Each village had a 'kavila' of its own which was maintained by the karnam or the village accountant. In this register were recorded the gudicut or the total extent of the village, the extent of the lands given to the Gods and the Brahmans, the names of the donors, the Saka and the cyclic years in which the donations were made, the extent of the land cultivated by each ryot, the tax which he had to pay thereon to the government, the boundaries of the villages and several other particulars of the kind. The village boundaries were zealously guarded by the villagers against encroachments by the ryots of the neighbouring villages. Several disputes regarding the boundaries of villages are recorded in the inscriptions. It is said that the village boundaries were minutely described in the government records. Copies of village kavilas were preserved in the chavadis or offices of the 'sthala', and 'sima'. Probably copies were also kept in the Atthavanam or the imperial revenue secretariat.

18. It should be noted that taxes on 'kadaramba' and several 'niraramba' fields were paid not in coin, but, in kind ; but taxes on certain types of 'niraramba' fields, *e.g.*, gardens where vegetables, sugarcane, plantain, and betel were grown, were received not, in kind, but, in coin, probably because their products being perishable, could not be stored for long periods.

19. *The pasture and the forest.*—Though the waste lands and jungles were useless for agricultural purposes, yet they yielded considerable revenue to the State. The staple industry of the country being agriculture, the maintenance of large numbers of cattle became a necessity. Again, the Kurubas and other pastoral communities reared large flocks of goats and sheep on which they depended for their livelihood. The pastures required for grazing cattle were owned by the government who let them to the cattle-breeders on rent. The rent paid by them was known as 'pullari' or 'hulluhanni'. The 'adatere' or the goat-tax which is so frequently mentioned in the inscriptions of the time must be assigned to this class. Moreover, the wood-cutter who cut wood in the forests for the purpose of selling it in towns and villages had also to pay a tax, which was called kondagutta or the hill rent. These taxes were not directly collected by the State ; but the right of collecting them was sold in auction to contractors or tax-farmers.

20. *The Jamabandi.*—The word jamabandi is defined by Kittel as 'the general assessment of land and the settlement of the Government dues, Wilson gives a fuller definition of the term.

21. It is said to mean "settlement of the amount of revenue assessed upon an estate, a village or district, annual settlement of revenue with cultivators or an annual settlement modified according to the circumstances under which the revenue is paid whether by individuals or by communities and whether to a zamindar or to the government." It also means "the annual tour of a revenue officer, village by village, for the settlement of assessment."

22. There is no evidence in the inscriptions, to show that jamabandi was known during the early period of the Vijayanagaram empire ; but the constant enquiries made by the emperor and his officials about the condition of the ryots, and the frequent remission of taxes registered in the lithic records indicate that there must have been something corresponding to the jamabandi. This belief is confirmed by an explicit statement of the Atthavana Tantram which refers to the jamabandi, settlement every year (with the government). Again the government are spoken of as preparing a consolidated list of all the babs (items of revenue) for jamabandi. If it were not possible to collect all the dues of the year completely, the arrears were entered in next jamabandi accounts under the head of 'silusila-baki', which was collected with the taxes of the succeeding year.

23. In his report on the land revenue of Canara, Mr. Thackeray states that the settlement made by Harihar Roy, Raja of Bijanagar, between the year of the Christian era 1334 and 1347 was based on the

rules prescribed by the Shastras and that it divided the gross produce in the following proportions :—

To the landlord ..	.. 7½ or ¼ or 25 percent.	
To the cultivator or labourer	.. 15 or ½ or 50 percent.	
To the sarkar ..	.. 7½ or ¼ or 25 percent.	
Total ..	30	100

The sarkar's share was again subdivided as follows :—

Sarkar, one-sixth of the gross	.. 5
Devadayam, one-thirtieth ..	.. 1
Brahmadayam, one-twentieth	.. 1½
Total	.. 7½

24. *Early Settlement in Madras under the British Government.*— It is interesting to note that the Government of Madras in 1855 considered that the assessment should not exceed 30 per cent of the gross produce, "under the most favourable circumstances" subject to progressive deductions according to the absence of advantages. But the Court of Directors in their reply dated 17th December, 1856 declined to accept this rule of assessment upon the gross and in view of the probable inequalities of the assessment, ordered that it should be a proportion of the net. The matter was subsequently discussed with the Home Government, and in 1864 it was finally decided that the rule should be one-half of the net produce. In re-settlements also the full advantage was not taken of the increase in prices, for example, in Godavari, in the first resettlement when the prices had been doubled the increase imposed was only 24 per cent.

25. Salem (or Baramahal) in Madras was taken up for settlement first. Captain Read was sent there with instructions to grant leases. Leases were offered to the headmen of single villages on the basis of the recorded assessment in Hyder's reign. In order to protect the cultivator a detailed field survey was also undertaken. The experiment was not successful. The cause of failure was over-assessment. In 1817, the Court of Directors issued instructions for the abolition of the village lease system and the ryotwari system was reintroduced. All the arable land under the ryotwari system was divided into fields and the assessment for each field was fixed. The occupant pays the revenue and deals directly with the Government, and is responsible only for his holding. He is given a patta which sets forth the extent and assessment.

The occupant enjoys all the advantages of the proprietorship subject only to the payment of land revenue. In the beginning there was considerable reluctance on the part of the cultivator to accept the responsibility of paying a fixed revenue. It had therefore to be made clear that the ryot was bound to pay the assessment only as long as he held the land, but that he was at full liberty to relinquish the land if he so desired. Any other ryot could apply for the land if he is willing to pay the assessment. In the early settlements much importance was attached to the then existing rates, which were very high. There were numerous downward revisions. Though the ryotwari system was attempted to be established as early as 1820, the scheme was not initially a great success. Even in 1855 only less than one-fifth of the area of the Madras Province was cultivated. In spite of uninterrupted peace, there was no extension of cultivation. The early surveys were also defective. Taking all these facts into consideration, it was decided in 1865 that a general revision of assessments should be made based on an accurate survey and classification of soils. Under the ryotwari system of settlement the soil of every field is classified under one of the fourteen classes with reference to its nature and composition. Each class was sub-divided into one of the five sorts--best, good, ordinary, inferior and worst. The actual yield was determined either by crop cutting experiments or by comparison with similar lands for which data was available. In determining the yield, the standard grains of paddy in the case of wet lands and cumbu, cholam and ragi in the case of dry lands were taken into account. The money value of the crop was worked out at the commutation rate which was the average of twenty non-famine years preceding the settlement. An allowance of 10 to 28 per cent was made towards transport and merchants profits. From the money value of the gross produce thus determined, was deducted (*i*) a percentage for the vicissitudes of season and unprofitable areas included in the holdings, and (*ii*) an amount equal to the estimated cost of cultivation. The State was entitled to one-half of the grain outturn thus arrived at, but in practice, the assessment was fixed at a much lower percentage. Soils of similar grain yields were bracketted together under Tarams. Villages were placed in groups taking into consideration their location, facilities for transport and marketing. It is obvious, therefore, that for the same class and sort of soil occurring in two villages one which has got excellent facilities for communication and another situated in an inaccessible place the same rate cannot be applied.

26. The ryotwari system was evolved after trying a number of other systems mentioned below :

1. *The Renting System.*—Villages were let on lease either to the highest bidder or on a rental based on the average collections

of past years. Under this system, individual distribution would be iniquitous and arbitrary and there would be scope for illegal exactions.

2. *The Asara.*—Conversion into money of the Government share of the crop as ascertained by estimate or actual measurement at the threshing floor. Under this system the ryot would be the victim of inquisitorial visits and extortionate demand of a host of petty officials. The public revenue would be at the mercy of ill-paid and unscrupulous subordinates to whom the system would afford a most easy opportunity for embezzlement. The cost of collection would be great.

3. *Visabadi.*—Distribution with the sanction of the Collector of the total demand of the village on the lands of each ryot.

4. *Joint Rent System.*—The whole body of the villagers was jointly and severally responsible for the rent which was revisable. Adjustments of individual responsibilities were left to the ryots.

5. *Mucta System.*—Rent was fixed on the village as a whole on the consideration of its resources. Details were left to the ryots. The demand was fixed so long as the system continued.

6. *The Olungu System.*—Confined to the districts of Tanjore, etc. Grain rent was commutable into money every year at the current market price.

7. *The Motta Faisal System.*—This prevailed only in Tanjore district.

8. *Tharao or Sarasari.*—This obtained only in South Kanara. The demand was based on the average collections realized from each estate for the preceding 16 or 17 years.

27. The initial survey and settlements of the districts in the erstwhile Andhra State were undertaken between the years 1864-1898. The initial settlements were in force for a period of thirty years after which resettlements were undertaken. There was no reclassification of the soil or even of the grain outturns, during resettlements. A new commutation rate based on the prices of twenty non-famine years before the year of resettlement was compared with the commutation rate adopted at the old settlement. Only if there was a marked increase, assessment was increased. But even then, not at the same rate as the increase in prices, as a good portion of it would have been absorbed as cultivation expenses and as it was also necessary to promote higher standards of living for the ryot.

28. Re-settlement operations were never popular with the ryots, as in all cases due to the steady increase of prices, resettlements always led on to an increase in land revenue assessment. They were finally ordered to be abandoned in 1939. The early ryotwari

settlements had many defects. There were great inequalities and the assessment was very high especially on garden lands irrigated by wells.

29. The assessments were dependent not so much on the estimates of the produce, as on former assessments which were rather high. It was calculated that on an average, Government at that time, took as its share, 50 per cent of the gross produce of irrigated land and 35 per cent of that of unirrigated land, while, to give the ryot any real proprietary interest in the land and to induce an extension of cultivation, from 25 to 30 per cent of the gross produce was believed to be the utmost that the Government should claim.

30. About the middle of the last century, *i.e.*, before the Mutiny, the question of relative shares of the State and of the landlords in the net produce of the soil came again for careful review in Northern India ; and the result of this further consideration of the matter was embodied in what are known as the "Shaharanpur Rules" (so called because they were issued in connection with the resettlement of the land revenue of the Shaharanpur district of the North-Western Provinces). The settlement rules previously, in force, authorised the demand of two-thirds of the net produce of an estate or rather of its value in money, as the Government share in respect of land revenue. The Shaharanpur Rules, issued in 1855, laid down "not that the revenue of each estate is to be fixed as one-half of the net average assets, but that in taking these assets with other data into consideration, the Collector will bear in mind that about one-half, and not two-thirds as heretofore, of the well-ascertained net assets should be the Government demand." There has been a progressive reduction in all States of the assessments during the last century, for example, in Orissa in 1822 it was 83.3 per cent of the assets, in 1833 it was lowered to 70.75 per cent; in 1840 to 65 per cent and later brought down to 54%.

31. Though, as mentioned above, resettlements were not popular with the ryots, it has to be recognised that in some of the earlier settlements the rates were very high.

32. In Madras too, the original average rates in general must have been much higher than those of the new settlement, while it is known that wet and garden rates were both excessive. As an example, in North Arcot, a typical ryotwari district, in 1805 the average assessments per acre were Rs. 11-1-0, Rs. 3-10-0 and Rs. 21-9-0 for wet, dry and garden lands respectively in the Southern Division, and Rs. 15-3-0, Rs. 3-12-0 and Rs. 18-9-0 in the Northern Division ; the maximum rates were of course far higher ; apparently, however, no charge was made for a second crop if grown, but no

reduction was made if it was not grown. These enormous rates, which threw all the higher assessed and best lands out of cultivation, were incessantly under heavy reduction up to 1864, but the reductions were only temporary expedients, while the areas and rates were doubtful and unequal, the areas being in many cases much against the ryot, as in Palmaner taluq, where the correct area was found to be 33 per cent less than the nominal area. Hence the new survey and settlement which began in 1871 the result of which is an average assessment of Rs. 4-15-2 per acre of wet land *plus* one-half extra for a second crop when grown, and Rs. 1-4-2 on dry land, in which latter are included all the gardens which bore the excessive assessments mentioned above. The contrast is appreciable.

33. *Land tenures in other States in India.*—Lands held in most parts of India, before the abolition of estates fell under one or other of the following three major systems:—

(1) the permanently settled estates system,
(2) the temporarily settled estate system, and
(3) the ryotwari system.

34. Apart from these three major systems, there are a number of minor systems in different parts of the country. The total area under the latter, however, is only a small portion of the area under the former. The permanently settled estate system was followed in most parts of the provinces of Bengal and Bihar, about one-half of Orissa, about one-third of Madras and smaller portions of the provinces of Assam and the United Provinces, nearly the whole of the Central Provinces (but not Berar), about a fourth of the province of Orissa and in some areas in provinces where the permanently settled estate system prevails. Subject to what has been said about the minor systems, the ryotwari system, generally speaking, prevails in the rest of the country. But certain areas which are not usually referred to by name as ryotwari (*i.e.*, Government estates or Khasmahal estates of Bengal and Orissa) are really of this category, since they differ in no essential respect from areas under the ryotwari system.

35. The features which distinguish the three major systems owe their origin primarily to differences in the character of the settlements of land revenue made in the course of the 18th and 19th centuries. The fact that the revenue was fixed in perpetuity under the permanently settled estate system and is revisable under the other two is a well known distinguishing feature. The other important difference between the ryotwari system on the one hand and the permanently and temporarily settled estate systems on the other, lies in the unit which was adopted for the purpose of settlement. Under the former, the revenue was fixed on individual pieces

of land and the actual occupants, who were recognised as possessing a permanent and heritable right of occupancy, became liable for its payment. Under the latter, the 'estate' was the unit and the holder of the estate (commonly called the proprietor) not the actual occupant of the land, became responsible for the payment of land revenue. The actual occupants were not, however, all tenants at will. It has always been an accepted principle in India that the occupant of the soil is entitled to remain in possession from generation to generation, provided he pays the customary dues either to the sovereign power or to the person recognised by that power as entitled to receive such payments. At the time of the original settlements, therefore, a large proportion of the occupied lands in the majority of the estates was held by persons who had a permanent and heritable right to occupy and cultivate the land, subject to the payment of the customary rent. In the early days of the British administration there was a tendency for the occupancy right to become obscured and obliterated. Many legislative measures have, however, been passed during the last 100 years extending this right of occupancy, with the result that today the great majority of tenants holding under proprietors (or sub-proprietors) possess a permanent and heritable right of occupancy in the lands of their tenancies. Home farm lands in which the holder of the estate enjoyed the right of occupancy, were the exception and were specially delimited by law as such.

36. Thus under the three systems, there was in respect of every individual piece of land, one person who was called the 'occupancy-right holder'. This occupancy-right holder is generally called a ryot under the ryotwari system, while under the other systems he is sometimes described as a tenant. The occupancy-right holder holding land under the ryotwari system pays land revenue direct to the Government, while the occupancy-right holder under the other two systems pays rent to the proprietor of the estate. Both payments are similar in character in the sense that they are not determined on a purely contractual basis. Under the ryotwari system, as well as the temporarily settled estate system, the amount of these payments is fixed at settlements carried out periodically by Government. The payments due on the lands held under the permanently settled estate system are less often settled in this manner. The original basis of the level of rents under this system was custom, modified partly by contract in the past and largely by legislation regulating the conditions under which rents may be altered.

37. It is not unusual to suppose that under the ryotwari system the land is held by a large number of small peasants in their own right, while under the other systems the land is held by

a relatively small number of large landlords whose lands are cultivated by tenants without any statutory rights. This is not the case. The central figure in all the three systems is the occupancy-right holder. The proprietors of estates are not occupancy-right holders in respect of the greater part of lands in their estates.

38. The various systems of land tenure prevalent in the several States are as follows :—

1. *Bengal.*—The principal system of land tenure is the Permanent Settlement created by the Regulation I of 1793. The revenue was fixed in perpetuity and all zamindars were placed in the same category. While some farmers obtained proprietary rights which they had never possessed, the independent chiefs and the old landholding families were confirmed in the position they had occupied for centuries. In certain cases, revenue free grants made by former rulers which were subsequently recognized and confirmed, are held as revenue-free estates. Later when the policy underlying the permanent settlement was abandoned, new estates were created with either Government or private persons as proprietors, liable to periodical revision of land revenue.

The "Estates held direct by Government" are the same as ryotwari tracts elsewhere. Most of the lands in the zamindari estates are held by ryots whose rights in the land and obligations to the zamindar have been regulated by a long series of tenancy laws, the net effect of which is that the ryot possesses substantially the same rights in his holding as ryots holding land direct from Government in Government estates in Bengal, and these again are practically identical with those of ryots holding direct from Government under the ryotwari settlement in other provinces. The incidence of rent payable by the ryot to the zamindar in Bengal compared, in general, favourably with the incidence of land revenue payable to Government by ryots in ryotwari areas. The land held by a ryot could be cultivated either by himself or by crop-sharing tenant, or by under-ryots. Under-ryots fall into three classes, of which the first possesses practically all the rights of ryots except transferability; the second and the third differ from the first mainly as regards liability to ejectment in certain circumstances. The tenant who is not an under-ryot is usually a crop-sharer (called bargader) and his relations with the ryot are purely contractual.

The characteristic feature of the condition of proprietary rights in estates was the prevalence of sub-division and sub-infeudation to a large extent. The zamindars were free to transfer their rights to whomsoever they might think proper by sale, gift, or otherwise.

The West Bengal Estates Acquisition Bill passed in November 1953 provided: (*i*) to eliminate the interests of all Zamindars and other intermediaries by the acquisition on payment of compensation ; (*ii*) to permit the intermediaries to retain possession of their 'khas' lands up to certain limits and to treat them as tenants holding directly under the State ; (*iii*) to acquire that interests of zamindars and other intermediaries in mines ; and (*iv*) to provide for certain other necessary and incidental matters. It has also provided that the estates should vest in the State within a definite period from the date of the passing of the Bill, irrespective of whether the record of rights or Compensation Assessment Roll has been finalised or not. The Government have been given the power to collect, if so requested by intermediaries, all arrears of rent in consideration of appropriating half of the amount collected.

2. *Bihar.*—The systems of land tenure prevalent in Bihar were substantially the same as in Bengal, the system of permanently settled estates being the predominant form to an even larger extent.

Under the provisions of the Bihar Land Reforms Act, 1950, the State Government acquired the rights of proprietors and tenure-holders in their estates and tenures respectively by notification from time to time. To dispel suspicion about discriminatory treatment to zamindars in taking over the zamindaris, the Act provided that when the interests of a particular zamindar having a gross income above a certain amount are acquired, the interests of all other zamindars whose income are within that income group will have simultaneously to be notified for acquisition.

3. *Orissa.*—Tenures prevailing in this province were substantially similar to those in Bengal, the area of permanently settled estates being relatively similar to in Bengal.

There are some distinctive features not present in Bengal which are described below :—

(*i*) Revenue-free estates in the northern districts of the province were of the same type as in Bengal; that is, a bifurcation of proprietary rights and occupancy rights existed, and cultivators acquired occupancy rights as in zamindaris. In the districts transferred to the province from Madras, this was not invariably the case. Cultivators holding under the revenue-free proprietors might acquire occupancy rights in some estates but notin others.

(*ii*) Though cash rent is the common feature in the province, a considerable area is held on produce rent which is generally of two kinds. The commonest form is known as the Dhuli-bhag, meaning an equal division of the grain and the by-products. The second form is that known as the Sanja (*i.e.*, contract), under which a fixed quantity of the produce is payable.

The following measures were passed by the Orissa Government in the course of the last few years for the abolition of the system of intermediaries and for regulation of the tenancy system :

(*i*) The Orissa Tenancy (Amendment) Act, 1946, confers occupancy right on non-occupancy ryots, under-ryots, service-tenure holders, etc., in respect of their home-stead lands.

(*ii*) The Orissa Tenancy (Amendment) Act, 1947, under which sub-division of holdings by metes and bounds becomes binding on the landlord to accept.

(*iii*) The Madras Estates Land (Orissa Second Amendment) Act, 1946, conferred occupancy right on tenants in whole inam villages (Inam estates).

(*iv*) The Madras Estates Land (Orissa Amendment) Act, 1947, empowered Government to fix fair and equitable rent in the proprietary estates of South Orissa where rents were abnormally high.

(*v*) The Orissa Tenancy (Second Amendment) Act, 1947, conferred occupancy right on Chandandars in respect of their home-stead lands.

(*vi*) The Orissa Communal, Forest and Private Lands (Prohibition of Alienation) Act, 1948, prevents landlords from alienating certain classes of lands on the eve of the abolition of zamindaries without the previous permission of the Collector. This has specially benefited the cultivating tenants on the private lands of zamindars.

(*vii*) The Orissa Tenants Protection Act, 1948, gives temporary protection to under-tenants against eviction and fixes the rate of produce rent payable by them.

(*viii*) The Orissa Tenancy (Amendment) Act, 1948 makes provision for reservation of adequate communal lands in a village.

(*ix*) The Orissa Tenants Protection (Amendment) Act, 1947, makes provision for division of hay and subsidiary crops between under-tenants and landlords.

(*x*) The Orissa Merged States (Laws) Act, 1950, confers rights of free transfer, full rights over trees and certain other tenancy rights on occupancy tenants in the merged States.

(*xi*) The Orissa Tenancy (Amendment) Act, 1950 gives option to service jagir holders to cease rendering personal service and to apply to the Collector for fixation of fair and equitable rent in respect of their jagir lands. It also made provision for settlement of fair and equitable rent in respect of the service jagir lands and the 'Khamar lands' of Rulers and Members of their family.

The Orissa Tenancy Act, applies to the 'Khasmahal' areas in the districts of Cuttack, Puri and Balasore and the amendments to that Act, referred to above are also applicable to those areas. Similarly, the Orissa Tenants Protection Act cited above also applies to the ryotwari areas of the State. The Orissa Merged States (Laws) Act, 1950 also applies to the ryotwari areas in the merged States.

In 1952, the Orissa Estates Abolition Act came into force, and it is modelled more or less on the lines of the report of the Land Revenue and Land Tenure Committee. The Act did not approve the Malikana Scheme of the Land Tenure Committee for compensating the dispossessed intermediaries.

4. *Assam.*—The major portion of two districts in this province (Sylhet and Goalpara) was settled under the zamindari system as in Bengal. The rest of the province was settled under the ryotwari system. The actual cultivator was a ryot either under the Government or the zamindar or a tenant under a ryot paying a share of the produce called Adhi-bhagi.

Under the Assam State Acquisition of Zamindari Act, 1949 rights of the tenure holders ceased and vested in the State.

5. *Uttara Pradesh.*—The system of permanently settled estates prevailed in the Banares Division, parts of Azamgarh district, and in parts of the districts of Gonda and Baharaich.

In accordance with the provisions of U.P. Zamindari Abolition and Reforms Act, 1951 all the Zamindaris in Uttara Pradesh vested in the State. It liberated the Uttara Pradesh peasantry from centuries of landlord exploitation. Under the new tenure there will be two main classes of tenure holders—the Bhumidars and Sirdars, and two minor classes namely Asamis and Adhivasi. All the existing Zamindars will be given 'Bhumidari' rights in respect of their 'Sir', 'Khud-Kasht' and grows. All the tenants of 'Sir', the Sardars will have the rights to become Bhumidars by paying ten times the rent.

6. *Old Madhya Pradesh now in Bombay and Bihar.*—In this province there were no permanently settled estates. The principal system in the Central Provinces was that of the temporarily settled estates similar to those in the United Provinces. The proprietors are known as *Malguzars.*

The Madhya Pradesh Abolition of Proprietary Rights (Estates, Mahals Alienated Lands) Act, 1950 eliminated the various categories of intermediaries namely, Zamindars, Malguzars and their under tenures in what was formerly known as the Central Provinces and 'Jagirdars', 'Izaradars' and 'Palampatdars' in Berar and thus the proprietary right in about 43,000 villages vested in the State Government by 31-3-1951.

7. *Kerala.*—In Malabar three distinct interests in land known as Janmam, Kanam and Verumpattam, were recognised, and their rights to some extent regulated by law.

8. *Bombay.*—The predominant form of tenure in this province is the ryotwari system. Out of 32.29 million acres of occupied assessed land, 24.44 million acres are held on this tenure. A small proportion of this area, 1.22 million acres, is held on what is called the restricted ryotwari tenure under which the holder is subject to the condition that the land cannot be transferred except with the permission of the Collector. The restricted tenure is generally made applicable only to Backward classes of cultivators.

9. *Punjab.*—Under the Punjab Occupancy (Vesting of Proprietary Rights) Act, 1952 and Abolition of 'Ala Malikiyat' and Talukdar Rights Act, 1952 all titles, rights and interests, etc., of such landlords and 'alamalics' were extinguished and vested in occupancy tenants and 'adana malikas' respectively. The occupancy tenants were given share in "Shamilats" with respect to the land concerned under the Punjab Occupancy Tenants (Vesting of Proprietary Rights) Act, 1952. A Bill was passed in 1953 for the abolition of the system of "Jagirdari" in the State which existed in certain areas.

39. *System of Ryotwari Settlement in Bombay State.*—It is necessary to give an account of the Bombay system of settlement since the erstwhile Hyderabad followed it very closely. The Bombay system has points of resemblance to that of Madras in as much as it proceeds on the same general plan, there is a survey of the land, division between the survey numbers and the determination of the revenue rate to be fixed on each field. The ryot has the privilege of relinquishing fields which he does not want and can apply for assignment of waste lands. Here also there is the jamabandi or the settlement of the annual revenue due from each ryot. Lands in the Deccan, as already mentioned, were measured and assessed at 1/4 of the annual average produce during the time of the Moghuls. Murshid Quali Khan was employed on this work for 20 years. The assessment made on each village was known as "Tankah". In the independent kingdom of Ahmednagar, a similar but not identical system was followed by Malik Amber. Though there was a lumpsum assessment for each village,

it was based on the crop. The Maharathas took into account the measurements but ignored the fixed assessment or "Tankah". They fixed a new "Karnal" assessment based on classification of soils, and the assessment became nearly double that of the 'Tankah' assessment. They fixed for irrigated and garden lands rates varying between Rs. 5 to 10. Sugarcane was charged at Rs. 10 per Bigha. The Maratha assessment could not be realised. A great part of the Deccan when the British took over, had been left waste and a cycle of very low prices set in. This caused great confusion in revenue administration. Mr. M. S. Elphinston laid down principles of abolishing farming but otherwise maintaining the whole system, levying revenue according to the actual cultivation, not imposing new taxes, and not writing off old taxes. In order to remedy the state of affairs it was decided to introduce the ryotwari system based upon a proper land survey accompained by an assessment of land revenue upon certain fixed principles. Mr. Pringle was appointed as a special officer. The survey of the cultivated fields was done by the 16 anna, 50 links or 33 foot chain. The standard was the acre and the square with one chain as the side which was 1/40 of an acre. There were also detailed calculations about the items of cultivation expenses. Unfortunately the data collected was not reliable, and therefore the conclusions reached were not of much value. Instead of a reduction in the assessment which was then quite necessary, there was a marked increase. Things went from bad to worse and it was almost impossible to realise the full revenue. In some districts only about half was realised. Every effort, lawful or unlawful was made to get the utmost out of the wretched peasantry who were subjected even to torture. Many of them fled to the neighbouring native States. In 1835 a recommencement was made that the depth and character of the soil, the capability of the soil and the general circumstances of the district should be taken into consideration in fixing the assessment. Later it was wisely decided to pool together the experience gained and formulate it into a system. In 1847 three settlement superintendents Wingate, Goldsmith and Davidson met together and drew up a practical and clear report known as the 'Joint Report of 1847' which was followed in the new system. The success which followed the new system was extraordinary and cultivation increased enormously. The revenue demand rose considerably, in spite of the low individual assessment and arrears were kept low and land acquired a value.

40. The real secret of the success was moderation in demand and of allowing to the ryot the utmost that the Government would leave with him. The early survey officers did not regard themselves as officials engaged in a technical and laborious duty, but as reformers in every sense of the term. They did a lot to improve the communications and to put before the Government schemes

for building bridges, constructing irrigation sources and even schemes for education and sanitation.

41. Coming to the details, soils were divided into three series, black, red and gravelly and each divided into three classes depending on the fertility. Each class of land was given an assessment rate per acre which was expressed at the out-set for the purposes of easy manipulation in "Reas" a Portugese coin 25 of which went to make the anna. The assessment was fixed after inspection and detailed inquiries at a level which the land can bear. The results fully justified the reduction in the assessments, because there was a marvellous increase in the prosperity of the tract.

42. In 1839, another important forward step, preparation of maps to scale was undertaken on the suggestion of Lt. Col. Davidson. This was also followed by the erection of special boundary marks to the fields. It was found that the nine classes of soil based upon colour did not cover the extraordinary variety resulting from variations in depth. Besides there were also defects caused by the presence of nodules of lime-stone, slope, admixture of sand, lack of cohesion, excess of water, excess of clay, etc. Different procedures were adopted in fixing relative value of what may be called Single factor.

43. The scale of soil classification is given below :—

Class	Relative value of class in annas or 16ths of a rupee	Soils of the		
		1st Order	2nd Order	3rd Order
		Of a fine uniform texture, varying in colour from deep black to dark brown	Of uniform but coarser texture than the preceding, and lighter in colour which is generally red.	Of coarse, gravelly or loose friable texture, and colour varying from light brown to grey.
		Depth in cubits	Depth in cubits	Depth in cubits
1	16	1¾	..	..
2	14	1½	1¾	..
3	12	1¼	1½	..
4	10	1	1¼	..
5	8	¾	1	..
6	6	½	¾	1
7	4½	¼	½	¾
8	3	..	¼	½
9	2	..	..	¼

In the joint report two extraneous factors were taken into account—first the factor of distance from the village site, and the second situation value with respect to fields in other villages. The advantages of having land near the village site are very obvious—carting of manure, watching and carrying the crops are comparatively easy. Fields lying within 3/4 mile bear a higher rate of assessment. Another special feature in Bombay Settlements is the special allowance made for " pot kharab " areas included in a holding which are not fit for cultivation due to a number of reasons.

45. In the Bombay system no attempt is made to represent in money, a definite fraction of the produce, or 'assets'. The basis of calculation is, in fact, the existing or former rates considered with reference to altered circumstances, the rise or fall of prices, improvement in population, means of transport, and other advantages. There has never been any attempt, as (in theory) is the rule in Madras, to fix, first, an average 'gross produce', and then an average 'cost of cultivation', by deducting which a 'net produce' for each class of land is arrived at ; nor is it attempted, further, to value a given percentage of net produce in money after ascertaining fair commutation prices.

46. In this matter the Bombay system is different. As Mr. Pedder remarks :

'The Bombay method is avowedly an emperical one. When a tract (usually a taluq or sub-division of a district) comes under Settlement....its revenue history for the preceding thirty or more years is carefully ascertained and tabulated in figured statements and diagrams. These show, in juxtaposition, for each year of the series, the amount and incidence of the assessment ; the remissions or arrears ; the ease or difficulty with the revenue was realized ; the extension or decrease of cultivation, and how these particulars are influenced by each other ; the effect of any public improvements, such as roads, railways, or canals and markets on the tract, or on parts of it, is estimated ; the prices for which land is sold, or the rents for which it is let, are ascertained. Upon a consideration of all these data, the total settlement assessment is determined. That amount is then apportioned pretty much in the same way on the different villages, and the total assessment of each village is then distributed over its assessable fields in accordance with the classification which represents their *relative* values in point of soil, water-supply, and situation.

47. The Revenue Officers from time to time make experiments as to outturn of crops, and the assessor makes use of them as checks—seeing how, at known prices, they would afford a proper margin of profit after paying the proposed revenue-rate ; but that is the only use of such experiments.

48. The process of revenue assessment in Bombay works from aggregate to detail. An examination is made of the circumstances of each tract with special reference to those which indicate the increase in the value of land since the last preceding settlement. An estimate is framed of the revenue enhancement which may be fairly imposed on each tract—or group of villages—and this enhancement is distributed over the ryots' holdings according to the holding valuation based on a survey of the area and of the quality of the soil. The valuation is relative, not absolute, and is practically used for distribution only, the actual amount of the assessment depending on the judgment formed of the aggregate assessment which can be fairly imposed on the tract or group of villages. The total enhancement is not framed with exclusive regard to prices, but prices are among the factors considered, and it can be shown that enhancements have commonly fallen short of the limit which the rise in prices would have justified. The general rule in connection with the revision is that the increase in taluqs must not exceed 33%, in a village, 66-2/3% and 100% in the case of an individual holding.

49. Previous to the year 1910 no official instructions existed, laying down the principles upon which settlement officers were to proceed in submitting proposals for Revision Settlements. The officers were, in fact, left to draw their own conclusions as to the methods to be followed from a study of the reports relating to preceding settlements. In 1910, however, under the authority of Bombay Government Resolution No. 9623, dated the 22nd October, a set of instructions, which had been agreed upon by the Commissioners of the three divisions and the Settlement Commissioner in conference, were issued for the future guidance of Settlement Officers. These instructions are by no means elaborate and simply lay down the general principles to be followed. They are summarised as follows :

(*a*) The problem for the Settlement Officer is stated to be " to revise the old maximum rates and to fix up a new set of rates for each group in the taluqs ."

(*b*) In carrying out this task " it is necessary for him first to ascertain to the best of his ability what is now the incidence of the existing assessments on the profits of cultivation. "

(*c*) Two lines of inquiry are then suggested an indirect and a direct line.

(*i*) The direct line enquiry :—

This comprises an investigation of the following subjects :—

(1) the statistics of cultivation and occupation ;

(2) the collection of the land revenue, whether it has been made with ease or difficulty ;

(3) The material condition of the people in general.
(4) Markets and communications ;
(5) The history of prices ;
(6) The statistics of the selling, letting and mortgage value of land.

Under this last head the importance of the Record-of-rights is emphasized, as furnishing a large body of information with regard to land values, though caution is enjoined in the use of the statistics obtained therefrom.

From a study of the information obtained under each of these heads the Settlement Officer will be able to draw broad general conclusions as to the direction which his proposal should take.

(*ii*) The indirect line of enquiry :—

This consists of an investigation of the subjects of rents and the ratio of incidence of the assessment upon them. Rents are divided into two classes, *viz.*, produce rents and cash rents.

(1) *Produce Rents.*—These again are sub-divided into two classes :—

(*a*) rents consisting of a fixed amount of produce the money equivalent of which can easily be ascertained ;

(*b*) rents consisting of a definite share of the gross produce.

(2) *Cash rents.*—These are described in the record of rights.

In the Bombay system of settlement the basis of assessment is modified according to any changes in the local conditions in population, improved means of transport, etc., no attempt is made to fix the assessment at a certain fraction of the net assets after determining the money value of the produce of a field. Crop experiments are made by Settlement Officers and the outturn of crops is determined, but the results are utilised only for checking the margin of profit that would be left to the cultivator after paying the revenue.

50. *Assessment of Land Tax in the other countries of the World.*—It will be useful to give an idea of the History of land taxation in other countries so as to indicate the points of similarity between them and the Indian Systems and to bring out by contrast the distinctive features of the latter. The income of the State from land in most countries is derived from two main sources—(1) State domains, (2) taxation of property in land or income derived from land.

51. In the earlier Middle Ages the royal domain was in most European countries the main basis of public income, but owing

to the extravagance of kings, which often took the shape of generous gifts to court favourites, to the growth of new ideas, to changes in the systems of Government, and to various other causes, the State revenue from this source dwindled in most cases to a comparatively insignificant figure. In the case of the local revenues, however, public lands continued, particularly in France and Germany, to be a very important source of income.

52. The land tax is one of the oldest taxes, and there is hardly any country in the world that does not levy it in some form or other. The methods adopted, however, vary considerably.

53. Thus, it may be based on (*a*) the capital value, which is usually determined periodically with reference to the sale value ; (*b*) the unimproved or public value, *i.e.*, such part of the capital value as is not due to the efforts or investment of the owners or occupiers ; (*c*) the net produce, *i.e.*, the gross produce less the cost of production ; (*d*) the annual value, *i.e.*, the gross produce less the cost of production and earnings of management ; or (*e*) the net income of the farmer, *i.e.*, the earnings of management plus the value of the labour of the farmer and his family.

54. In France, the apportionment of tax was on the net produce of the land after deducting from the gross produce, the cost of cultivation, sowing, harvesting and maintenance of the cultivator and his family. The system was based on a cadastral survey begun in 1807 and completed in 1850. The survey, however, became completely out of date, and the whole system of land taxation was reformed between the years 1907 and 1914. It was converted into a uniform tax at 4 per cent of the annual value. It was raised to 5 per cent in 1917. Lands are divided into 13 classes, and in determining the class, rent is the principal factor. The rent paid to the landlord or in cases in which the cultivator is himself the owner, the competitive rent for similar land in the locality is the standard. Income derived from land is liable to general income-tax. In Italy there were two scheduled taxes :—(1) A tax at a flat rate of 10 per cent of the economic rent assessed according to a system of cadastres, (2) a tax at 18 per cent on the income of the cultivating farmer. Income up to a small limit are exempted. Both the landlord and tenant were liable to income-tax. The land tax in Hungary was based on an obsolute survey. The nominal rate was 25 per cent of the cadastral yield, but really the incidence was only between 8 to 12 per cent. In addition to this, there were (1) A general income-tax varying from 1 per cent to 40 per cent with the size of the income. (2) A capital tax, the rate of which varies from 1 to 20 per cent of the net revenue on the capital. (3) Certain local surcharges, the rates of which vary in different places.

55. Land tax in Austria was also levied on similar basis at $26\frac{2}{3}$ per cent of the net cadastral yield which was equivalent to about 10 to 15 percent of the real yield. There was also a local land tax and an income tax. In the case of large estates, the combined rate of taxation approaches 70 per cent of the return, while a land-owner enjoying an income of about £ 400 pays 25 to 30 per cent if the assessment is made accurately.

56. Up to the year 1921, the Bulgarian land tax was based on annual value as arrived at with the aid of the cadastre. This tax was abolished in 1921 and an income-tax introduced. In Sweden, the land taxes were abolished and a progressive income-tax at rates varying from 5 to 22 per cent have become the main tax of the country. The English land tax in its present form dates from the year 1692 and was originally both a property and an income-tax assessed at 4 shillings in the pound on the annual value of all land and houses on the stipends of public officials and on movable property. This was later converted into an apportioned tax in 1697 and later in 1798 it was converted into a perpetual redeemable rent charge. The farmer's profits are assumed to be a multiple of the annual value of the land unless accounts were produced showing them to be less. The land is also subject to a heavy local rate which is the chief source of tax revenue for local purposes in rural areas. In Australia it was based on the unimproved value of the land. In New Zealand, there is an exemption on holdings of small farmers whose lands are worth less than £ 500, but there is a progressive tax on the larger estates. In China, before 1925 land was divided into 3 classes each of which was sub-divided into three grades, and the tax consists of two parts, one payable in money and the other in produce. In Japan, the estimate was based on the capital value. There was also an income-tax on agricultural income. The Indian system has been evolved from a number of local indigenous practices, and has also been moulded by local Officers to suit local circumstances.

57. Some features of the present system of land revenue which are considered as defects have been mentioned by the Economic Enquiry Committee of 1931. The first point on which emphasis has been laid is that the assessment is made with reference to the capacity of the land and not with reference to the circumstances of anybody who holds the land. It also does not take into consideration the ability of the person taxed to pay. It is also said that this system of assessment is not only not progressive but also actually tends in the other direction. The income from land on which assessment of land tax is based is not the net income after meeting the requirements of the land holder and his family and in consequence even low incomes and no incomes are not exempted from taxation.

58. Besides revenue from land, Government from very ancient times have been getting revenue from irrigation and have accepted the responsibility of constructing irrigation works. A study of the development of irrigation from ancient times is also relevant from the point of view of taxation for the provision of such facilities. The science of irrigation is believed by some students of history and literature to have been known in prehistoric times. Plato's writings include a detailed description of an elaborate and extensive system of irrigating canals in the sunken island of Atlantic.

59. Many of the early Egyptian rulers were instrumental in the development of technical knowledge in the field of irrigation. The fertility for which Egypt was known throughout the recorded past must be attributed to the utilization of the waters of the Nile for irrigation. In about 2000 B.C., the Nile was diverted through a channel twelve miles long into lake Moeris. During flood periods, excess river waters were stored in the lake ; in times of drought, the lake waters irrigated adjoining farm lands. Thus we find record of what was probably the world's first artificial lake and storage reservoir for irrigation water. Other irrigation developments in which Egypt was the first included the artesian well, the milometer for gauging streams, and great canal systems for both irrigation and navigation.

60. In Egypt, also, the earliest known mechanical aids for lifting water from one level to another were developed. The simplest method was the use of water-proof baskets to lift water from a stream into an irrigation ditch. A more complicated device used in Egypt and India was the "Shadoof". It consisted of a pole balanced on a crossbeam with a bucket at one end and a counterweight at the other. The counterweight eased the labour of lifting the water to a higher level. Sometimes a number of "shadoofs" were used in a series when the height of lift was too great for one. This ancient device is still in daily use in the valley of the Nile.

61. Other mechanical devices in use early in the history of irrigation include water wheels rotated by the current of moving streams, water wheels driven by man power or animal power, a trough equipped with paddles on an endless belt and powered by a man on a treadmill, and a screw rotating in an enclosed cylinder.

62. Much of the success of the Babylonian Empire more than four thousand years ago was due to a stable and productive agriculture based on irrigation. Hammurabi, great builder of the Babylonian Empire, counted the extensive irrigation systems among

his proudest accomplishments. Records have been unearthed expressing his personal pride in having " changed desert plains into well-watered lands. " The ancient works of Babylonia included a lake 42 miles in circumference and 35 feet deep to store the flood waters of the Euphrates River for irrigation. The great Nahrawn Canal which diverted water from the Tigris River was more than four hundred miles long, varied in width from two hundred and fifty to four hundred feet, and was used for both irrigation and navigation.

63. Semiramis, until recently considered a legendary Assyrain queen, appears in Babylonian history about 1,200 years after Hammurabi. She also evidenced considerable pride in the irrigation developments under her regime. The proclamation on her tomb reads ; " I constrained the mighty river to flow according to my will and led its waters to fertilize lands that had before been barren and without inhabitants. "

64. Great irrigation works were developed in Persia during the rule of Darius some five hundred years before Christ. The method used to bring water to lands where no streams or other water supplies were available is a first class engineering marvel by any standards. Tunnels were dug for many miles into the surrounding mountains to tap underground sources from which the water flowed by gravity. These tunnels or " kanats " often extended hundreds of feet below the surface. All digging was done by hand and vertical shafts or wells were dug at frequent intervals so that excavated material could be removed. " Kanats " are still constructed and used in Iran (formarly Persia) in much the same way as they were twenty-five hundred years ago.

65. Irrigation structures in China and India are probably as ancient as those in Egypt. At first, irrigation in China was limited to the delta lands of the Yellow River, but as more complicated systems were devised, irrigation was extended to other arable lands. The most extensive irrigation systems were planned by Li Ping, Governor of Chengtufu, in the third century before the Christian era, and completed by his son. The Imperial Canal is one of the greatest works of all time, being 700 miles long and usable for both irrigation and navigation.

66. Large-scale reservoirs and irrigation canals were constructed in India many centuries prior to the Christian era. By 300 B.C. India had developed irrigation to a point where reports on the advantages of growing two crops a year on irrigated lands became a part of written history.

67. As early as the first century A.D., the Romans practised irrigation on an extensive scale. The importance of irrigation in

the Roman economy is indicated by the attention given to irrigation in the famous codes of law formulated in the fifth and sixth centuries after Christ. Certain hours of the day were specified when water from the famous Roman aqueducts could be used for watering of gardens and farms in much the same way that many present day American cities establish irrigation hours. Also, as is characteristic of many of our cities today, considerable difficulty was experienced in getting some water users to comply with the regulations.

68. Julius Caesar took the practice of irrigation with him wherever he went in the process of conquering and colonizing. Irrigation was fostered in all the Mediterranean countries with many remains still in evidence. A type of flood irrigation grass land was introduced into England by the Romans and is still practised along the Avon River.

69. Greece also paid considerable attention to the development of water resources. Masonry aqueducts were numerous and one canal included a mile-long tunnel through a hill.

70. The Arabs were among the leaders in spreading knowledge of irrigation, and it was the Arabian People and the Moors, who introduced irrigation in Spain when they invaded that country. The Moors developed extensive irrigation systems in Spain during the tenth century A.D. with the result that some of the most arid regions of the country became her most productive ones.

Systems of irrigation charge.

71. *Water rates in other States in India.*—The present system of irrigation charges has developed differently in different States with the result that there is multiplicity both in the principles and in the rates of levy. A broad classification of the charges would be :

(1) those payable by cultivators in return for the service of irrigation and thus forming an item in the cost of production ; and

(2) those payable by the owners of lands benefited, in consideration of the increase in the value of the land.

72. The system of water rates, water cess or occupier's rates, as they are variously termed, constitute the bulk of irrigation revenue. Except on projects in scarcity areas which are undertaken with definite protective intent, water charges on the productive schemes vary both in the method and the rates of levy. A rough indication of the variation in charges for the principal crops or classes of crops in different areas as well as the basis of

their assessment is given in the statement below. The more important systems of levying water charges may be grouped under the following heads :

(*i*)Volumetric rate, *i.e.*, a charge according to the quantity of water delivered.

(*ii*) Consolidated rate, *i.e.*, water charge which is consolidated with the land revenue assessment and fixed on the settlement principle.

(*iii*) Differential rate, *i.e.*, a rate for water taken on dry land from Government sources of irrigation corresponding to the differences between the assessments on dry lands and wet lands.

(*iv*) Occupier's rate, *i.e.*, a fixed rate charge on the area actually irrigated and which usually varies with the nature of crop or crops.

(*v*) Agreement rate, *i.e.*, a charge based very much on the same lines as in (*iv*) above, but which is fixed by agreement for a period of years and paid for, whether water is taken or not.

SYSTEMS OF WATER CHARGES AND PRESENT SCHEDULES OF WATER RATES IN CERTAIN STATES

State	Types of prevailing systems	Schedule of Rates.	
1	2	3	
1. Bihar ..	1. Acreage rates (lease and demand) Fixed with reference to price of crops; economic value of crop and increase in yield.	Long term rates	Rs. 6 to 9
		Rabi ..	Rs. 4 to 7
		Kharif ..	Rs. 8 to 10
	2. Volumetric rates on tube wells.	Hot weather crops	Rs. 4 to 15
2. Bombay	1. Consolidated rate on old works.	Sugarcane ..	Rs. 120 per year.
	2. Acreage rates varying with crops and seasons.	Other perennial crops	Rs. 80 ,,
		Kharif	Rs. 6 ,,
		Rabi	Rs. 8 ,,
		Hot weather crops	Rs. 15 ,,
3. Madras ..	1. Consolidated rate on old works.	1. For six months crops:	
		1st Class source	Rs. 6
		2nd Class source	Rs. 4

1	2	3
3. Madras (*Contd.*)	2. Water cess on dry lands irrigated from Government sources (fixed or differential)	2. For other crops: (*a*) 1st and 2nd crop: 1st class Rs. 4 to 6 2nd class Rs. 3 to 4-8-0 (*b*) 3rd crop: (Both sources) Rs. 0-12-0 to 2-0-0
	3. Special project rates on major river projects.	
4. Punjab ..	1. Occupier's rates (crop rates)	Sugarcane .. Rs. 13 8-0 to 16-8-0 Wheat .. Rs. 6-6-0
	2. Canal advantage rate fixed with reference to increased rental value.	Cotton .. Rs. 6-12-0 Rice .. Rs. 9-12-0
	3. Volumetric rate (contract basis).	(Half the flow rates on lift Irrigation schemes)
5. Uttar Pradesh ..	1. Owner's rate (on increased rental value)	Sugarcane Rs. 8 to 32 Wheat .. Rs. 10 to 12
	2. Occupier's rate	Rice .. Rs. 4 to 14
	3. Volumetric rate on tube-wells	Cotton .. Rs. 2 to 4-8-0 Rate on tube wells .. Rs. 1 per 11,000 to 16,000 gallons of water. (Half the flow rates on lift irrigation schemes).
6. West Bengal ..	1. Improvement levy (based on net additional yield)	Long lease (up to 6 years) Rs. 6 Rabi and converting lease Rs. 6-8-0
	2. Agreement rates	Improvement levy on Damodar Canal. Rs. 5-8-0
7. Orissa ..	1. Lease rates	Sugarcane .. Rs. 5-8-0 to 7-8-0 Rice .. Rs. 4-4-0
	2. Water cess (based on price of crop and ability to pay).	Cotton, Wheat Rabi Crops Rs. 2
8. Pepsu ..	1. Acreage rates varying with crops.	Sugarcane Rs. 9-14-0 to 15-0-0 Cotton Rs. 6-14-0 Wheat Rs. 6-4-0 Maize Rs. 6-0-0 Oil seeds Rs. 5-6-0 to 6-0-0
9. Mysore ..	1. Acreage contributions	1. Acreage contribution Rs. 100 to 300

1	2	3
9. Mysore (*Contd.*)	2. Water cess	2. Water rates Sugarcane Rs. 25 Wet lands Rs. 10 Dry conversions Rs. 15 Dry to semi-dry lands Rs.7 Proposed rates on new schemes
	3. Water rates (based on capital cost, class of water supply and payment ability).	3. Irrigation cess at one anna per rupee of assessment on minor works.
10. Hyderabad ..	Consolidated rate	Sugarcane Flow Irrigation Rs. 60 to 43. Flow Irrigation Rs. 7 to 16 Lift Irrigation Rs. 2-8-0 to 10-8-0
11. Travancore-Cochin.	Consolidated rate	Wet lands Rs. 2 Dry conversions Rs. 7-0-0 Lift Irrigation (All lands) Rs. 25
12. Saurashtra ..	1. Crop rates	Wheat, Jowar, Barley, Kharif. Rs. 5 per bigha. Linseed, Turmeric etc., Rs. 10 per bigha.
	2. Monthly rates	Sugarcane .. Fruits and Gardens Rs. 3 per bigha'

NOTE :— Except as otherwise stated, water rates under col. (3) are charged per acre per season.

73. The principle of appropriating a part of the value created by a public project is not new, for in the States which were not permanently settled, it was customary to appropriate to Government a share of the rise either by an increase in land revenue at the revision of the settlement or by the imposition of special levies such as 'owner's rates' in Uttar Pradesh or a 'canal advantage rate' in Punjab. The "owner's rates" and the canal advantage rate' differed from the present day betterment levies in that the incidence was very much lower and the charge was permanent. The 'inclusion fee' sometimes levied on projects in Madras for the privilege of inclusion in the guaranteed area is also a fixed charge representing Government's share of unearned value A system of betterment levy, in the sense in which it is understood at present, was in vogue in Mysore as far back as 1888. The principle of the beneficiaries contributing to the cost of a development scheme was

recognised and provision was made to levy acreage contributions which are analogous to a betterment levy, varying from one-third to one-fifth of the difference between the local market value of an acre of dry land and an acre of wet land. Besides, the difference in market value, other factors such as character and permanence of irrigation water supply, nature of soil, availability of agricultural labour, etc., were also taken into consideration while computing the market value of wet land.

Abolition of Estates

The Madras Estates Land Act (I of 1908) was intended to declare the rights of the cultivators and the land-holders in a clear and unambiguous manner. But sections 27 and 28 relating to presumptions about fair and equitable rent, sections 30 to 35 relating to enhancements and sections 40 and 41 relating to commutations which were intended to apply only to non-occupancy lands had been mis-applied as against occupancy lands also. The ryots had been subjected to the payment of ever-increasing land revenue assessment on account of the arbitrary exercise of the power of land-holders to enhance the land revenue assessment according to their will and pleasure. The ryots had on that account become heavily indebted to their creditors and in many cases were obliged to surrender their rights in favour of their creditors, having been unable to pay the unbearable land revenue assessment and also the illegal exactions on the part of the officials of the land-holders. The composite Madras State was anxious to remove the zamindars who were mere farmers of Revenue but who were rack renting the tenants. In 1937, the Prakasam Committee examined the conditions in the zamindaries and recommended to the Government to abolish them. During World War II, the ministry went out of office. After the war, when the free Government took office the estates in the composite Madras State were abolished through the Madras Estates (Abolition and Conversion into Ryotwari) Act, 1948. To give relief to the ryots, even when this Act was under discussion, the Government passed the Rent Reduction Act 1947.

2. It came into effect from 1st July, 1947. After a quick examination of the village accounts, the Special Officer for Rent reduction fixed reduced rents and reported to Government. The Special Officer adopted the following procedure in fixing the reduced rents.

(1) He called for detailed statement showing the rates of rent then prevailing for wet, dry and garden lands together with the extents under each rate. He calculated the average rates for the wet, dry and garden lands with the help of the detailed statement obtained from the villages.

(2) He made similar calculation in respect of a typical ryotwari village as near as possible and arrived at the average wet, dry and garden rates. The ryotwari village to be selected by him was to contain lands similar to those in the village for which the rent reduction was being applied. In arriving at the wet rate, he took into consideration the similarity of the classification of the sources also.

(3) He then compared the rates of rent prevailing in the village with the adjoining ryotwari village arrived at by the calculation mentioned above. Then he suggested the reduction called for in the rents existing in the village and proposed reasonable reduced rates that should be applied.

(4) In the case of villages where grain rents were existing the Special Officer converted them into cash and proposed the reduced rates in cash.

(5) Where money rates varying with the crop, were charged, like Rs. 23 for Sugarcane and Rs. 30 for betel vine, such rates were treated as garden rates and reduction proposed.

3. The Government notified the reduced rents in the official Gazette. From that date, the occupancy ryots were required to pay the reduced rents. These reduced rents were to continue till the rates of assessment were fixed after survey and settlement, in the estate areas taken over by the Government, under the Estates (Abolition and Conversion into Ryotwari) Act XXVI of 1948.

4. The next step has been the abolition and taking over of the estate areas under the Act quoted above. This was necessitated for the following reasons.

The zamindari system, in force, in the province outlived its usefulness. In many estates, in the province, the rent levied by the landholder from his ryots was substantially in excess of the assessments charged by the Government on similar land in the neighbouring ryotwari area and the rent was in certain cases beyond the capacity of the tenants to pay. The zamindari system perpetuated an assessment which has no relation to the productive capacity of the land. It further led to loss of contact between the Government and the actual cultivator and has acted as a brake in regard to agricultural improvement. Most of the irrigation works in estates were in a state of disrepair. The complexities of the zamindari system have led to an immense volume of litigation. Many of the records in the offices of zamindars were indifferently maintained and the peasantry, most of whom are illiterate, were at the mercy of unscrupulous agents. Zamindari administration has rarely if ever been as efficient as administration in Government areas. There was thus an acute discontent among estate ryots and there was a good deal of agitation by them. Most of the Estates in the State have been taken over in batches, from 1949 to 1951, after notifying the date in the Gazette. About a fifth of the estate area abolished was surveyed and the rates of assessment, in force, in the district according to the latest resettlement, were applied to the lands in the estates surveyed. The survey and settlement operations would be completed by 1-7-1962. The tenants were given relief under the Rent Reduction Act 1947, even though the settlement rates have not yet been introduced in them.

Abolition of Jagirs and Inams in Telangana

The lands of the composite Hyderabad State may be broadly divided into two groups, according to the nature of the management and revenue administration.

(1) Areas which are under the direct management of the Government and the revenue from which goes to the Government. Such tracts are called Diwani or Khalsa areas.

(2) Areas, the revenue from which had been wholly or partly assigned to some person or institution. Land of the second group may further be divided into the following three classes :

(1) Sarf-e-khas lands, which were till recently the property of the Nizam, and the revenue from which went to his privy purse, were merged in Diwani areas in February 1949. The Sarf-e-khas tracts which comprised 1961 villages, covering an area of 8,000 sq. miles, have now become an integral part of the State and the distinction between Diwani and Sarf-e-khas no longer exists.

(2) Estates which have been the subject of State grants, and the revenue from which had been assigned wholly or partly are the Jagirs, Paighas and the Samasthans. The Jaghirdhars and Rajahs in charge of these estates functioned as zamindars in the Andhra region but some of them had also powers to dispense civil and criminal Justice, and

(3) Lands which have been granted to persons to whom the revenue from such lands was alienated partly or in full for the services already rendered to the State or to be rendered to the State and the community are called Inams and 'Manyams'.

Ryotwari tenure in Diwani.—Diwani lands as well as most of the Sarf-e-khas lands are generally held by the cultivators on purely Ryotwari tenure. Over 20 million acres or nearly 60% of the erstwhile Hyderabad State area was held by the ryots on this tenure. With the addition of Sarf-e-khas lands, nearly 70% of the total area of the State came directly under Government control.

Ryotwari tenure.—Theoretically, the Ryotwari tenure does not contemplate any middleman between the cultivator and the State ; yet as the registered occupant need not always and necessarily be the actual cultivator, certain tenures inferior to that of the registered occupant (pattedar) based on contract or custom, do occur in Ryotwari Villages. The forms in which land was actually held and worked under the Ryotwari system may be classified as below :—

1. Pattedar.—Pattedari or simple occupancy, where the occupant cultivates personally or through hired labour.

2. Pot Pattedari.—Pot Pattedari, in which two or more cultivators hold a joint patta. The pattedar can neither evict the pot-pattedar nor enhance the assessment payable by him.

3. Shikmidari.—Shikmidari, where the occupant makes over the land to cultivators on certain terms. Such cultivators are known as Shikmidars and they cannot be evicted as long as they fulfil the terms of their agreement with the registered occupant.

4. Asami Shikmi.—The Asami Shikmis are tenants-at-will. In 1354 F. the Asami Shikmis Act was enacted on the lines of Bombay Tenancy Act, 1939, to protect the interests of such tenants.

Other tenures of lands.—Besides the ryotwari tenure there were other tenures of Khalsa land namely 'Pan-Maqta', 'Tahud' or 'Sarbasta' and 'Ijara'.

1. Panmaqta.—Panmaqta is kowl or tenure by contract in which lands were given to the holders on a fixed cash rent without liability to enhancement. The rights of these holders were examined by the Inam Commission and only those which were proved to be valid were confirmed in favour of the holders.

2. Tahud or Sarbasta.—Prior to the introduction of Ryotwari system, the land revenue of the State together with certain other cesses used to be farmed out to contractors. This system was called "Tahud". If the revenues were farmed out to an influential resident of the district, as was frequently the case in Telangana, the transaction was termed "Sarbasta" or "Bilmaqtha". The 'Tahud' or 'Sarbasta' tenure was a lease for a specified period and the amount to be paid was liable to alteration after the expiry of the period of kowl. This system was abolished by Sir Salar Jung I, as it proved to be prejudicial to the interests of both the peasantry and the Government.

Ijara.—The Ijara tenure was introduced by Sir Salar Jung with a view to rehabilitate the deserted villages and to bring under cultivation large tracts of cultivable land which were lying fallow

Under this system, the land was assessed at favourable rates subject to progressive increase till the full assessment was levied, the period of concession varying from five to thirty years. After the expiry of the concession period, the land was fully assessed. This system was also abolished in 1318 F. (1909 A.D.).

Non-Khalsa lands.—The most important of this class of lands were the Sarf-e-Khas lands which have now become a part of Diwani.

Peshkash.—It was customary with Muslim conquerors to levy annually a certain fixed amount as tribute from conquered rulers, and chiefs. This tribute was called Peshkash. The Rajas of Gadwal, Anagundi (now in Mysore) and Gurugunta were paying the Peshkash.

The tax or quit-rent levied from pan-maqthas held by local zamindars, who were revenue farmers under previous Governments was also called "Peshkash". The Rajas of Wanparthi, Jetpole, Gopalpet and Palvancha belonged to this category.

Jagir.—A Jagir is a free grant of one or more villages as a reward for some conspicuous service rendered, or for maintaining the status and dignity of the grantee. This tenure may be classified under six heads.

(*a*) Paigah or Jamiat Jagirs.—These were originally assigned by the then Ruler, His Highness Nizam Ali Khan Bahadur to Abdul Khair Khan for the maintenance of troops known as His Highness house-hold troops, and hence they were designated Paigah Jagirs, the word Paigah meaning, "Stables". These Jagirs covered an area of 3452 sq. miles and were divided among three branches of the family of the original grantee and were known as the Paigahs of Asman Jah, Khurshid Jah and Viqar-ul-Umra.

(*b*) Al-tamga Jagirs.—The word Altamga signifies a revenue free grant made under the Royal seal. It is a perpetual and hereditary grant and the right of interest conveyed by it is not transferrable by sale, gift or bequest.

(*c*) Zat-Jagirs.—Zat-Jagirs are grants of large areas of land for the maintenance of the grantee without any stipulation of service.

(*d*) Tankha-Jagirs.—Tankha-Jagirs, as their name implies, were grants of land made to meet the salaries due to the grantees for service rendered. A large number of these have been resumed or redeemed.

(*e*) Mashrooti Jagirs.—Mashrooti Jagirs were granted for the performance of some definite service, religious, civil or military and are continued only so long as the conditions of the grant are fulfilled.

(*f*) Maddad-Maash Jagirs.—Maddad-Maash Jagirs were granted either as the sole means of maintenance for the donee, who may be the holder of Mashrooti grant or as a supplement to his other income.

Minor Inam.—The word 'Inam' means a favour or reward. An Inam holding is thus a grant of land in which the State has alienated its right to the land revenue, or to a portion of it, in return for the performance of certain duties or as a charitable endowment. Inam lands are found in almost all villages. In some cases the whole village belongs to the Inamdar and is called an 'Umli'. Umlies are included in the definition of a Jagir according to the Abolition of Jagirs Regulation and have now been taken over by the Government. The total number of Inamdars in the State, was 83,000 of whom 57,000 were in Diwani and 26,000 in Jagirs.

Abolition of non-Ryotwari tenures

The abolition of non-Ryotwari tenures like Sarf-e-khas and Jagirs has been the most striking land reform in Hyderabad by the Military Government. Sarf-e-khas was the estate of H.E.H. the Nizam, and Jagirs were areas granted by the Nizam from time to time in recognition of the meritorious services performed or on the condition of continuing to render some services to the State or to some religious or charitable institution. In all, these areas covered about 40% of the area of the erstwhile Hyderabad State.

The status of Jagirdars in Hyderabad State was quite different from that of the Zamindars of the permanently settled areas in Andhra region. The Jagirdars were assignees of the land revenue and did not have any proprietary right in the soil. In addition to collection of land revenue through their subordinate officials, they had jurisdiction over excise, forests, fisheries, etc. Some of them also had judicial and police powers. These powers were taken away and the Jagirs were finally abolished and their administration was taken over by the State in 1949 under the Hyderabad (Jagirs) Abolition Regulation. Sarf-e-khas was taken over earlier under Hyderabad Sarf-e-khas (merger) Regulation. All these areas have now been completely integrated with the other Diwani areas.

Inams

In the erstwhile Hyderabad State, some lands were held by paying a part or no land revenue assessment to the State. They were called Inams. In these cases the State gave up its right to the whole or part of the land revenue in favour of an individual or an institution as remuneration for the performance of certain duties, or endowments for the maintenance of Charities. These grants varied from small isolated fields to whole village. They had multiplied in the period when the central power was weak and many illegal claims were set up. Detailed enquiries were therefore, undertaken by an Inam Commission which worked from 1865 to 1903. The Inams which were proved to be valid were confirmed and fresh title deeds were issued. In other cases, the Inams were resumed or charged with a portion (called Judi) of the full revenue at the discretion of the Government. Inam lands did not come under the purview of the Jagir (Abolition) Regulation.

Inam was held to be a restricted tenure. The restrictions were that Inam lands were not transferable and that at each succession the grant made by the Ruler had to be confirmed. They were also subject to the following conditions:—

(*i*) Performance of service wherever it was prescribed as a condition for grant of Inam;

(*ii*) At each succession the grant was presumed to be a fresh grant made at the discretion of the grantor;

(*iii*) Inam land could not be alienated without the permission of the Government.

With a view to converting the Inam tenure ,into Ryotwari tenure by removing the restriction (*ii*) and (*iii*) above, the Hyderabad Enfranchised Inams Act was enacted in 1952. A quit-rent or Judi at 1/8 of the land revenue assessment was charged in lieu of relinquishment of the reversionary rights of the Government. Later on it was considered that the Scheme envisaged under the 1952 Act was not in keeping with modern trends as the said Act while making no provision for the rights of the tenants on the Inam lands, allowed to the Inamdar the remission of assessment to the extent of 7/8 of the land revenue. To remedy the above mentioned defects the Abolition of Inams Act of 1954 was amended in 1956, and subsequently when some basic amendments to the Act were under consideration, it was found necessary to postpone the application of the Act.

Levy of Full assessment on Inam lands

The origin of the inam tenure can be traced to grants made by Hindu Rulers for the support of temples and charitable institutions, for the maintenance of holy and learned men and as rewards for past public services rendered. This practice was followed by the Mohammedan rulers and by the British Administrators until about a century ago. According to the ancient Hindu law, there were two beneficial interests in land, namely, (1) that of the sovereign or his representative, and (2) that of the cultivator holding the land.

The sovereign's right to collect a share of the produce of the cultivated land was known as 'melvaram', the share of the ryot or cultivator being known as 'Kudivaram'. The grant of an inam did not touch, and could not have touched the cultivator's right in the land, namely, the Kudivaram, except in rare case where the grantee was also holding the cultivator's interest at the time of the grant. Inams therefore fall under two classes (1) those in which the grant was of the land and land revenue and (2) those in which the grant consisted of only the land revenue. Generally the presumption is that they fall under the second category unless it could be proved that at the time of the grant, the inamdar was in occupation of the land or that it was waste at the time of the grant. The Madras Inams Act VIII of 1869 declared that the enfranchisement of an inam and the grant of a title deed to the inamdar should not be deemed to define, limit, infringe or destroy the rights of any description of holders or occupiers of the lands from which the inam was derived or to affect the interests of any person other than the inamdar named in the title deed, or to confer on the inamdar any right in the lands which he would not otherwise possess. Thus, the right of the inamdar did not ordinarily extend to the occupancy right of the land especially in the case where the inam consisted of an entire village, for it was extremely unlikely that the inamdar was occupying the whole village as an occupancy ryot at the time of the grant or has lawfully acquired the entire kudivaram right in the whole village by reclaiming the waste land and growing a village in his holding. Until the 1st July, 1918, the Government and the Courts held that the burden of proving that the inamdar had the kudivaram right lay on him. This position was altered by the decision of the Privy Council of that date and it was laid down that the burden of proof did not lie either on the inamdar or on his tenant but that each case should be decided on its merits. This decision was in favour of the inamdars as ryots could not support their claims with documents. To remedy this defect the Madras Government passed Act XVIII of 1936 namely the Madras Estates Land (Third Amendment) Act, 1936. According to this act, the burden of proving that any land in which the inamdar claims that the tenant does not have the occupancy right and his "private land", was on the inamdar. The holder of an entire inam village was considered to be the farmer of the melvaram only as in the case of a zamindar and that he did not hold the kudivaram right until he was able to establish it.

2. The inams fall into two broad classes—major and minor. The major inams consist of the grant of whole villages on favourable tenure with or without conditions of service attached to them. These are whole inam villages. The minor inams consist of grants of isolated fields or plots on favourable tenure to the inamdar and subject to the rendering of some service or other in most cases or

as a reward for past service, etc. Before the amending Act of 1936, only those major inams which consisted of the melvaram only and not the kudivaram or the cultivating rights in the land were subject to the provisions of the Madras Estates Land Act 1908. But after the amendment, all the whole inam villages became estates, within the meaning of the Madras Estates Land Act, 1908. Under the Madras Estates (Abolition and Conversion into Ryotwari) Act, 1948, only the major inams where the grant consisted of the melvaram, stood abolished. The other major inams consisting of both the Melvaram and Kudivaram rights fell outside the purview of the Abolition Act, 1948.

3. Under the terms of the Inam settlement, a large number of minor inams particularly those that were classified as personal benefit inams and inams granted as a reward for past services, or those granted for the rendering, or continued rendering of revenue or police services in the villages have all been enfranchised. The effect of enfranchisement, has been that in exchange for an annual payment called quit-rent, calculated at a fraction of the normal assessment on the land at that time, the Government conferred absolute title on the holders, and also made a categorical declaration that there would be no further interference with the holdings. The implication is that there would be no further enhancement in the levy on the land by way of assessment proper. The unenfranchised inams consist largely of religious and charitable service inams and artisan service inams (for services to be rendered to the village community, *i.e.*, by carpenters, blacksmiths, washermen, potters, barbers, etc.) In addition to this, there are also public utility inams and also a few inams for the maintenance of irrigation sources yielding public revenue. The religious and charitable service inams and artisan service inams are held free of assessment on the payment of jodi or kattubadi, but they are liable for resumption for breach of conditions of service including alienation of land. The difference between the assessment due from the land and the jodi or kattubadi represented the annual value of the grant made to the inamdar. If the assessment due from a land was Rs. 500 and if the Ruler wanted to give as a gift only an annual value of Rs. 300 the balance of Rs. 200 was fixed as jodi or kattubadi which the inamdar had to pay. In cases of village services or artisan inams, the rules particularly provide that in case of breach of any of the conditions of service, an attempt should be made for the continuance of service as far as possible by a regrant of the resumed inam to some other artisan willing and capable of rendering the service. The regrant in these cases consisted of the net assessment which represented the assessment, if the land was free from any payment and by the difference between the assessment and the jodi or kattubadi payable on the inam land.

4. As far as enfranchised or quit-rent inams are concerned, there is no objection at all in principle to terminate the favourable assessment and levy the full assessment. They have been obviously undisturbed for a long time because of the implication of the enfranchisement, which was understood to be that the quit-rent was in complete quittance of not merely the existing but the reversionary claims of the Government to the land and the only difficulty was the question whether compensation would be payable if full assessment is levied. Under the Constitution, no citizen can claim immunity from taxation and the State is not competent to alienate public revenue or to grant such immunity; and in so far as the levy of full assessment partakes of the nature of a tax on the land, to that extent immunity cannot be claimed. The mere fact that some concessions shown in the past cannot bind the hands of the Government from levying full assessment on the land and therefore, no compensation would be payable for levying full assessment on quit-rent inams.

5. There remains the category of unenfranchised inams, the bulk of which relate to religious and charitable services and to artisan services. These inams have to be deemed to consist of both the land revenue assessment and the land itself and there is therefore no difficulty in levying full assessment in respect of these lands also. But in respect of service inams which are granted subject to the condition of rendering certain specific prescribed services to the village community, there is some justification to retain them as inams subject to payment of quit-rent or jodi or kattubadi, etc., as the case may be. Such service inams are (*i*) village carpenter, (*ii*) village blacksmith, (*iii*) village barber, (*iv*) village washerman, (*v*) village potter, (*vi*) village purohit or priest, (*vii*) village astrologer, (*viii*) village archaka, (*ix*) village vetti, (*x*) village nirganti, (*xi*) village madiga, etc.

6. In the above circumstances, the Government have abolished all other inams in respect of which the grant has been made confirmed or recognised by the Government and which were not included as inam constituting estates under the Madras Estates Land Act 1908 and converted them into ryotwari lands under the provisions of the Andhra Inams (Abolition and Conversion into Ryotwari) Act, XXXVII of 1956. According to this Act, the person or institution holding such land as inamdar shall be entitled to a ryotwari patta in respect thereof in a ryotwari or zamindari village. In the case of an inam land in an inam village, 1/3rd share of the inam land, if the land is under the occupation of any tenant, is allowed to the inamdar and the balance of 2/3rd of the land is given away to the tenant on a ryotwari patta. With the introduction of the above Act, it may be said that the inam tenure is almost extinct at present in the Andhra region.

7. The Government have also levied full assessment on inam lands in the State of Andhra by promulgating Act No. XVII of 1955, (The Andhra Inams (Assessment) Act, 1955). For all these inams the assessment levied is the same as in the case of similar ryotwari lands.

CHAPTER III

Principles and Method of the Existing Settlement in the Andhra Region

In the ryotwari system, the ryot pays his fixed assessment, in money, direct to the Government and the assessment is not liable to arbitrary fluctuations, from year to year. Water-rate, is however charged on dry land, when irrigated from a Government source. The ryot cannot be evicted from his land so long as he continues to pay the assessment, and he can transfer his rights in the land to others by sale, gift, partition, etc. He can, moreover, relinquish his land when he finds that its cultivation is no longer profitable, and in that case he would not be liable to pay the assessment, once his relinquishment has been accepted. In unfavourable seasons, remissions are granted on liberal principles. In short, under the ryotwari system, a ryot enjoys all the advantages of a perpetual lease, without its disadvantages and responsibilities, so long as he pays to the Government, their share in the produce, which represents the land Revenue due from the land.

2. The first attempt, at a systematic survey and settlement, was made in 1802, in the ceded districts. The ryotwari system, was in a state of flux till 1855, when the unequal and heavy incidence coupled with the incessant but unsystematic reductions compelled the Government to introduce a new method of survey and settlement in all the districts. This system was modified from time to time in the light of experience gained. During the early period, the assessment was based on the gross produce of the land approximating to 30%. But since the procedure was considered as favouring the most fertile lands and pressing with increasing severity, on the poorer lands, the present system of fixing it on the basis of net produce was introduced in 1864.

3. The basic principles, laid down from time to time by the Government for the settlement of assessment of ryotwari lands are:

(1) The assessment shall be on the land, and shall not depend upon the description of produce, or upon the religion, or profession of the landholder.

(2) The classification of soils is to be as simple as possible, and is to be alike everywhere instead of each village having its own.

(3) The assessment is to be fixed so as not to exceed half the net produce after deducting from the gross, the expenses of cultivation and allowances made for the vicissitudes of season and merchants' profits.

(4) No tax is to be imposed for a second crop on dry land, but wet lands which in all ordinary seasons have an unfailing supply of water for two crops are to be registered as double crop, the charge for the second crop being generally half the first crop assessment. Remissions may be given when the supply of water fails. Some abatement is allowed in cases where water is raised by baling.

(5) The Tahsildar, or in the course of a resettlement the Special Settlement Officer or Special Assistant Settlement Officer, may allow the charge for second crop to be compounded in respect of all irrigated lands for which the supply of water is ordinarily unfailing. The rates of composition were generally as follows:—

For wet land irrigated from a second class irrigation source-one-third.

For wet land irrigated from a third class irrigation source-one-fourth.

For wet land irrigated from a fourth class irrigation source-one-fifth.

For wet land irrigated from a fifth class irrigation source-one-sixth.

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Where the irrigation is precarious and the supply is supplemented by wells, the Divisional Officer, or in the course of a resettlement the Special Settlement Officer or Special Assistant Settlement Officer, may allow the charge for second crop to be compounded at one-half of the rates referred to above, except under sources grouped in class 1 or 2 for settlement purposes. Composition at such favourable rates may be allowed to lands for which the charge for second crop has already been compounded at the ordinary rates. If the wells, however, fall into disrepair, the land should be transferred from compounded double crop to single crop wet. Ryots may be permitted to compound at any time and to any extent even after the settlement. It is immaterial whether the well, from which the supplementary supply is received, lies within the wet lands or not, but before granting composition at the special rate, the Divisional or Settlement Officer must satisfy himself that the well water is actually used to supplement the supply from the irrigation source. It will also be necessary to ascertain by annual inspection that the well is properly maintained and that it is used to supplement the supply from the irrigation source.

(6) Collectors may sanction transfers of registered and compounded double-crop wet lands to single crop wet lands on the application of the holders of such lands, in cases where the supply of water from the registered source is sufficient for raising only one wet crop.

(7) As a rule, all lands are classed under the two general heads "wet and dry". In some districts, however, another class of lands called "manavari" has been recognized by Government. These are lands upon which wet crops are grown with the aid of rain water impounded on the land or with the water of swamps, small ponds or the like, or in some cases tank bed lands. Manavari lands are usually assessed at special rates which are intermediate between the dry and the wet rates otherwise applicable.

Collectors are authorized to sanction *with the consent of the registered holder during the term of a settlement*, transfers of ryotwari lands from "dry to wet" and *vice versa* and from manavari to "dry" or "wet" and *vice versa*.

(8) Lands forming the ayacut of "doruvu" wells should be charged with water-cess at one-fourth or one-eighth of the water-cess that would be leviable for irrigation by direct flow of a first wet crop on dry lands irrigated from the sources on the banks of which the doruvu wells are situated according as the water is raised by single or double lift.

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When different rates have been prescribed for a first wet paddy crop and any other first wet crop, the rate applicable to a first wet crop of paddy should be adopted for the purpose of this rule. No water-cess shall be levied for the irrigation of a second or third crop with water from doruvu wells.

4. Under the existing system, survey always precedes settlement. After a detailed and accurate survey of all the lands in each village, the settlement operations are commenced. The main stages in the settlement operations are briefly as follows :—

(1) The classification of soils.

(2) The determination of grains to be adopted as standards.

(3) The valuation of soils, in standard grains, or as they are technically termed "grain out-turns".

(4) The determination of commutation prices and the conversion of grain outturns into money.

(5) The determination of the allowance to be made for vicissitudes of season and unprofitable areas.

(6) The calculation of the expenses of cultivation.

(7) The determination of money-rates.

(8) The grouping of villages in respect of dry lands.

(9) The classification of sources of irrigation, as judged by the certainty and efficiency or water supply.

(10) The merging of soils.

5. The rate of assessment on land is based on its productive capacity, which depends on the nature of the soil, its physical and mechanical composition and some other factors which affect the fertility of the land. Lands are, therefore, to be classified according to these characteristics. There are five main series of soils. They are–

I. The alluvial and exceptionally rich Delta soils as well as garden and other permanently—improved soils of more than ordinary productiveness.

II. The regar or black-cotton soil with all its varieties of 'masab', etc.

III. The red ferruginous soil originating from sandstone, laterite, etc.

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IV. The calcareous soil, originating from underlying strata of chalk or lime. This soil is of very rare occurrence in this region.

V. The arenaceous soil, consisting of more or less pure sand and found as a rule, on the Sea coast.

With reference to the physical properties, each of these five series is divided into three or five classes according to the proportions of clay and sand or other organic matter found in the soil. Even among the soils of the same series and class, some lands may be better than other lands, in point of production. A further divison into best, good, ordinary, inferior or worst is, therefore, made. These divisions are called sorts of the soil. The broad principle laid down by the government is that though exact accuracy is not possible, in the classification of lands, the classes should be few and based on real and distinguishable differences of soil and the sub-soil.

The recognized table of soils is given below :—

Series	Class	Description	Sorts
Alluvial and exceptional	I	Clayey (upwards of two-third clay).	(1) Best (2) Good (3) Ordinary (4) Inferior (5) Worst
	II	Loam (containing less than two-third clay) permanently improved. *i.e.*, lands in the beds of ruined tanks and sites of ruined villages, and Lankas in the bed of Godavari and Krishna	1 to 5.
Regar ..	III	Clay regar, containing upwards of two-thirds clay.	do.
	IV	Mixed or loamy regar containing from one-third to two-thirds clay	do.
	V	Sandy regar, containing not more than one-third clay.	do.
Red ferruginous .	VI	Clay containing upwards of two-third clay.	do.
	VII	Mixed or loamy, containing from one-third to two-third clay.	1 to 5.
	VIII	Sandy or gravelly, containing not more than one-third clay.	do.
White and grey calcareous.	IX	Clay, containing upwards of two-third clay.	do.
	X	Mixed or loamy, containing from one-third to two-third clay.	do.
	XI	Sandy or gravelly, under one-third clay.	do.
Arenaceous	XII	Loamy or mixed one-third to two-third clay.	do.
	XIII	Sandy containing from one-third to one-tenth clay.	do.
	XIV	Sandy under one-tenth clay.	do.

The main purpose of 'sorting', in settlement work, is to allow for various local peculiarities and other defects that may exist in respect of lands falling in the same settlement class in a village in order that some discretion may be exercised in deciding the rate of assessment to be adopted for individual fields. The money rates for the higher sorts are higher than those for the lower sorts. Only a minimum number of sorts are adopted in a village and they are applied to fairly large blocks. The principles of sorting differ for dry and wet lands.

(*a*) The disadvantages common to dry and wet lands are:

(*i*) The intrinsic fertility of the land.

(*ii*) The liability of the land to submersion, erosion, and

(*iii*) The distance from the village site.

(*b*) The principles specially applicable to dry lands are those for removing the anomalies that arise due to dry grouping.

(*c*) The principles specially applicable to wet lands are:

(*i*) The level of sluices through which water is made available.

(*ii*) The distance from the irrigation source.

(*iii*) The drainage facilities and

(*iv*) Other factors like nearness to village, distance from threshing floors and ravages by wild beasts.

At the initial settlement considerable time, attention and care were bestowed on the soil classification. Later on at the resettlement, it was checked in a general way and any glaring errors were rectified. The result is that the classification and sorting of soils in Andhra is now fairly accurate. This is evident from the lease and sale values of lands under different tarams or rates of assessment. It is found that lands under higher tarams generally fetch higher lease and sale values.

6. The next step, in the operations is the ascertainment of the standard staple grain for each tract or district. The main principle governing the selection of the grain is that it should be the most widely grown and consumed food-crop. The reason underlying this principle is that food products are the ultimate standards of value and that it is not also easy to ascertain and check the out-turn of some of the non-food crops without relying on the estimates of the growers. White Paddy is the staple standard grain for wet lands and Cholam, Cumbu, Korra, Arika and Ragi are the standard crops for dry lands.

7. Having determined the standard grain for each tract, the next step is to ascertain the outturn of such crop on lands of different classes and sorts of soils. In the early stages of the

settlement work this was done after numerous crop-cutting experiments on different classes of soils. But after 1882, the actual crop-cutting experiments were dispensed with generally and the average of the outturns of the adjoining districts was adopted. Actual experiments of outturns were conducted only in special cases.

8. As the assessment is payable, in cash, the grain outturns require to be commuted into money values. There was no uniform method adopted for computing the commutation rate in the settlements conducted in the earlier years. In those settlements, the prices for as many years as were available were taken into account in calculating the commutation rate. But after 1885 this method was modified and the prices of 20 non-famine years preceding the year of settlement were taken into account in working out the commutation rate. In some cases, the prices of some years immediately preceding the settlements were left out when such prices were not considered normal. A percentage varying from 10 to 25 for paddy and 10 to 28 for dry grain was allowed for cartage and merchants' profits and the resultant figures were adopted as the commutation rates. This deduction, has, however, been 15% generally, in the case of all Andhra districts.

9. From the commuted value of the crop thus fixed, deductions were made for arriving at the net value of the produce, (1) for unprofitable areas in the holdings called 'Pot Kharab' in Telangana and for the viscissitudes of the seasons and (2) cultivation expenses. In regard to the cultivation expenses, the old practice was to work out separately for wet and dry lands, the expenses of cultivation of lands of the best soil and then proportionately reduce them for lands of the lower sorts. For purposes of calculation, the cost of cultivation was worked out under five main items, *viz.*, (1) ploughing, (2) agricultural implements, (3) seeds, (4) manure and (5) labour. In the composite Madras province the labour contributed by the pattadar and his family is also included in calculating the cost of cultivation. It is, however, very difficult to determine it accurately but only a careful estimate is aimed at after local enquiry.

10. From the net value of the produce, money rates for different classes and sorts of soil were calculated.

In 1864, the Government's share was fixed so as not to exceed one-half of the net produce. In fixing the actual rates of assessment, it is usual to adjust half the net amount so as to produce an even gradation from one rate to another. In no case, however, are they equal to or in excess of half the net amount.

11. The rates thus determined would reflect the relative value of the lands with reference to their soils, productive capacity and other inherent defects and advantages of the lands concerned. But there are other circumstances which affect the relative value of the lands. These are facilities for communications, nearness to the markets, healthiness of the localities and ravages by wild animals. The presence of one or more of these factors will affect the relative net value of the produce in different localities. To Remove such inequalities and difficulties the device of grouping is resorted to. Different groups are assigned for villages containing lands of the same soil, class and sort when such factors distinguish one tract from another. This is a valuable device adopted to equalize the burden and is an important element in the process of settlement.

12. The following narration shows how the staple crops are selected, the grain outturns determined, the commutation rates fixed, the costs of cultivation allowed and finally the money rates are worked out.

The percentage area of each crop, raised in each taluk, is examined; those foodgrains which show a higher percentage are taken to be the standards; then the prices of those occupying a subordinate position, the area of those of equal or approximate value is distributed under each of the standards; and lastly the percentages of areas of the staples thus arrived at will be the proportion of each standard, the outturn of which is calculated on an area of land, as illustrated below:--

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	Acres	percentage of cultivated area	Represented by
Ragi	11,614	13½	Ragi.
Paddy	17,839	20¾	
Indigo	11,743	13¾	
Total ..	41,196	48	
Varagu	11,631	13½	Varagu.
Cumbu	7,561	8¾	
Cholam	3,242	3¾	
Gram	1,951	2¼	
Topes	13,546	15¾	
Oil-seeds	6,475	8	
Plantations and Vegetables			
Total ..	44,406	52	

Having thus obtained the standards wherewith to work out the money rates, the estimated outturn of each soil is assigned thereto, half in ragi and half in varagu, thereby equalizing the value of the crop by taking the mean of the two grains most extensively grown. The following will explain the course pursued :—

Class	Sort	Crops	Extent	Outturn	Value at Rs. 142 for ragi and Rs. 89 for Varagu.		
			Acres	M.M.	Rs.	As.	Ps.
4.	2	Ragi	0.50	160	7	1	7
		Varagu	0.50	220	6	1	11
		Total value of gross outturn ..			13	3	6

Paddy being the only standard for wet, Ragi and Varagu can be taken as the standards determined for dry lands upon the foregoing considerations.

13. Sometimes, the areas of special products of higher value may need to be added to the area of the standard of a lower value in order to equalize the burden of assessment on all kinds of soils. To arrive at the grain values, much consideration is given, and every precaution is taken to obtain as fair results as possible.

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14. The Settlement Officer and his subordinates made numerous experiments for the purpose of ascertaining the actual outturn, or yield of land, sown with staple products, taking full, ordinary, indifferent crops ; and, with the aid of intelligent and respectable ryots, an average outturn per acre, such as will apply to a series of years, good and bad, and to ordinary tillage, was eventually fixed for each kind of soil for one class of land as specified on the next page by way of example :—

REGAR LOAM, CLASS IV WET—OUTTURN IN M.MS. PER ACRE IN SORT 1

	Best (1)	Good (2)	Ordinary (3)	Inferior (4)	Worst (5)
1. As per opinion of villagers ..	516	464	414	359	307
2. As per opinion of Tahsildars ..	528	504	565	439	372
3. As per experiments in procedure—					
(*a*) Good—					
(1) By Revenue Department	953	790	760	782	547
(2) By Settlement Department	1,076	936	773	689	567
(*b*) Middling—					
(1) By Revenue Department	688	595	408	524	298
(2) By Settlement Department	794	643	527	455	382
(*c*) Bad—					
(1) By Revenue Department	533	511	438	301	392
(2) By Settlement Department	581	480	402	318	283
(*d*) Average—					
(1) By Revenue Department	775	681	529	522	331
(2) By Settlement Department	853	701	581	491	422
4. Proposed grain value for wet ..	840	720	600	530	460
5. Proposed grain value for dry ..	444	380	316	286	246

The same process is repeated for all classes of soils of wet as well as dry lands.

15. The yield thus arrived at is converted into money at the commutation price, to be determined according to the average of prices prevailing during the series of twenty non-famine years preceding the settlement. The average prices are, say, Rs. 120 for white paddy, Rs. 161 for ragi and Rs. 97 for varagu.

These quotations, however, represent the merchants' selling prices, and if applied to the transactions of the ryots, would, obviously, tend to over-assessment, but in order to obtain the wholesale, or ryots' prices, a deduction of 15% in the case of all Andhra

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districts, is usually made from the market prices. This not only meets the cost of cartage and the merchants' profits, but fixes for the ryots, with a liberal margin, the approximate wholesale prices he really obtains. Supposing it to be 12½ per cent, the commutation prices resolve themselves into—

Rs. 105 for white paddy,
Rs. 142 for ragi, and
Rs. 89 for varagu.

From the results thus obtained, a deduction of from 5% to 25% is usually made in order to compensate for vicissitudes of seasons, as well as to allow for such portions of fields, as being occupied by bunds, pathways, water-courses, etc., which are unproductive, but which are nevertheless, included in the area of the "survey field".

16. The fields having been classified, according to their physical and mechanical composition, their productive powers having been ascertained by experiment, etc., and these results having been converted into a money equivalent based on the average selling prices of a series of twenty years, and a percentage deduction having been made on account of transport charges and merchants' profits, the next operation is the estimation of the cultivation expenses, which used to be one of the most difficult and most conjectural of the various steps in connection with a settlement.

17. The manner in which this was done was to ascertain, separately, what extent of wet land and that of dry could be, under ordinary conditions of the district, cultivated by one plough and a pair of bullocks.

The result was, to a certain extent, checked by the average acreage per plough. The results were reduced to acres and decimals. The items of cost usually included in the estimate were—

(1) Cost of ploughing cattle.
(2) Cost of agricultural implements.
(3) Seed.
(4) Manure.
(5) Wages of labour required for sowing, transplanting in wet, reaping, threshing, etc.

The method of calculation varied according to the description of crops grown and of culture of ryots, as well as according to the practice of making the various payments in each district. In some, these are made in grain, in others in money and in some in both grain and money. The payments made in grain were converted into money at the commutation price adopted for the settlement.

The cost of bullocks and of the implements of husbandry was distributed over the number of years during which they were estimated to be serviceable and the other items were calculated for each year.

It must be remembered that as already stated, these calculations were made for the area which one plough can cultivate and then reduced to terms of an acre.

The usual practice was to work out the expenses for the best soil and then to proportionately diminish this standard, as the quality of soil descends.

The cost of feeding cattle was not provided for in the estimate of cultivation expenses, as the straw was taken as a set-off against this item. If, however, in any district or tract, the feeding charges were known to be specially higher, owing to grain being given to ploughing cattle, this was taken into account.

18. The cultivation expenses were calculated, say, at Rs. 11 for IV-1 class and sort of soil. They would run something as under :—

Wet land	Cost per acre		
	Rs.	a.	p.
Ploughing cattle	1	12	0
Agricultural implements	1	0	1
Seed	1	2	5
Manure	1	10	8
Wages	5	6	1
Cost of cultivation per acre of wet land ..	10	15	3
	or Rs. 11 roundly.		
Cost of cultivation per acre of dry land (one-half of the above).	5	8	0

These expenses being deducted from the gross assets, *i.e.*, the value of the total outturn, the result will be the approximate net produce of the land under examination. The Government demand shall not exceed half of this net produce. When this system is applied to each description of soil, we get what, is termed the "money rate" or future assessment for wet and dry lands, respectively.

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The following figures will illustrate, in a concrete manner, how these money rates are arrived at :—

19. The grain values assigned to the wet and dry lands, of regar loam, irrigated by third-class source, and situated in the first dry group, are as follows :—

	White paddy in Wet third class sources.	Dry first group Varagu or Ragi.
	(Madras measures.)	
Best ..	840	444
Good	720	380
Ordinary ..	600	316
Inferior ..	530	286
Worst	460	246

The commutation price is Rs. 105 for paddy and Rs. 89 and Rs. 142 for varagu and ragi, respectively, these being the market price in a series of twenty years, less 12½ per cent, deducted as being the difference between the market and ryots selling prices, and as allowance for cartage.

The commuted value of the gross produce per acre stands as follows :--

	Wet			Dry		
	Rs.	a.	p.	Rs.	a.	p.
Best	27	9	0	15	8	6
Good	23	10	0	15	3	6
Ordinary ..	19	11	0	10	14	7
Inferior	17	6	3	9	13	3
Worst	15	1	6	8	6	1

From these values are deducted a sixth for wet lands and a fourth for dry lands for vicissitudes of season and unprofitable areas, the corresponding amounts being :—

	Wet			Dry		
	Rs.	a.	p.	Rs.	a.	p.
Best	4	9	6	3	14	1
Good	3	15	0	3	4	10
Ordinary ..	3	4	6	2	11	8
Inferior	2	14	4	2	7	4
Worst	2	8	3	2	1	6

After deduction, we are left with the following figures:—

	Wet			Dry		
	Rs.	a.	p.	Rs.	a.	p.
Best	22	15	6	11	10	5
Good	19	11	0	9	14	8
Ordinary ..	16	6	6	8	2	11
Inferior	14	7	11	7	5	11
Worst	12	9	3	6	4	7

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From these are again deducted the cultivation expenses of the following amounts:—

	Wet			Dry		
	Rs.	a.	p.	Rs.	a.	p.
Best	11	0	0	5	8	0
Good	9	12	0	5	0	0
Ordinary ..	8	8	0	4	10	0
Inferior	7	8	0	4	6	0
Worst	6	8	0	4	2	0

The net values left are—

	Wet			Dry		
	Rs.	a.	p.	Rs.	a.	p.
Best	11	15	6	6	2	5
Good	9	15	0	4	14	8
Ordinary	7	14	6	3	8	11
Inferior	6	15	11	2	15	11
Worst	6	1	3	2	2	7

Half these amounts, *i.e.*, the share which is the maximum that can be taken by Government, are shown below :—

	Wet			Dry		
	Rs.	a.	p.	Rs.	a.	p.
Best	5	15	9	3	1	2
Good	4	15	6	2	7	4
Ordinary	3	15	3	1	2	5
Inferior	3	8	0	1	7	11
Worst	3	0	7	1	1	3

The above amounts are rounded off to the following rates, which are those finally fixed as the assessment:—

	Wet			Dry		
	Rs.	a.	p.	Rs.	a.	p.
Best	6	0	0	3	0	0
Good	5	0	0	2	8	0
Ordinary	4	0	0	1	12	0
Inferior	3	8	0	1	8	0
Worst	3	0	0	1	0	0

20. Next, the villages in the tract are "grouped" for dry lands and the sources of irrigation are classified. The rates appertaining to each group, or class, are next determined. In the illustration already given, the rates arrived at are for the third class of wet and for the first class of dry, which were taken as being normal groups. The rates of the second and fourth classes in

wet are respectively obtained by raising or lowering one grade. For the first, is affixed a set of rates, one gradation higher throughout, than those of the second. In the same manner, the rates for the second and third groups in dry are worked out from the first-class rates given above. The highest rate of a lower group village is, for the same class and sort of soil, a rate lower than the assessment for the group immediately above it.

The following table shows the rates of the normal groups for wet and dry in the case for which figures were worked out above as example :—

WET

Class	Sort	Primary taram	First class source			Second class source			Third class source		
			Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
IV	1	1	7	8	0	6	0	0	5	0	0
III	1	2	6	4	0	5	0	0	4	0	0
IV	2										
VII	1										
III	2	3	5	0	0	4	0	0	3	8	0
IV	3										
V	1										
VI	1										
VII	2										
VII	1										
XII	1										
III	3	4	4	0	0	3	8	0	3	0	0
IV	4										
V	2										
VI	2										
VII	3										
VIII	2										
XII	2										
XIII	1										
III	4	5	3	8	0	3	0	0	2	8	0
IV	5										
V	3										
VI	3										
VII	4										
VIII	3										
XIII	2										
XIV	1										
III	5	6	3	0	0	2	8	0	2	0	0
V	4										
VI	4										
VII	5										
VIII	4										
XII	3										
XIV	2										

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WET.—(*Contd.*)

Class	Sort	Primary taram	First class source			Second class source			Third class source		
			Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
V	5	7	2	8	0	2	0	0	2	0	0
VI	5										
VII	5										
XIII	3										
XIV	3										
						DRY					
II	1	1	4	0	0	3	0	0	2	8	0
II	2	2	3	0	0	2	8	0	2	0	0
IV	1										
III	1	3	2	8	0	2	0	0	1	12	0
IV	2										
VII	1										
III	2	4	1	12	0	1	8	0	1	4	0
IV	3										
V	1										
VI	1										
VII	2										
VIII	1										
XII	1										
III	3	5	1	8	0	1	4	0	1	0	0
IV	4										
V	2										
VI	2										
VII	3										
VIII	2										
XII	2										
XIII	1										
III	4	6	1	0	0	0	12	0	0	8	0
IV	5										
V	3										
VI	3										
VII	4										
VIII	3										
XIII	2										
XIV	1										
III	5	7	0	12	0	0	8	0	0	6	0
V	4										
VI	4										
VII	5										
VIII	4										
XII	3										
XIII	3										
XIV	2										
V	5	8	0	8	0	0	6	0	0	4	0
VI	5										
VIII	5										
XIV	3										

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These rates are applied to the survey areas placed under each class and sort of soil.

In the early settlements the grouping of villages was applied for both wet and dry lands and was based entirely on the quality of soils, villages containing superior lands being placed in higher group than those containing inferior lands. The procedure was changed during the resettlements. Grouping is applied only to dry lands according to the modern settlement. Since the quality of the soils is liberally discounted in the soil classification through the sorts, the grouping as regards dry lands is resorted to in order to make up for inequalities in the following respects:

(*a*) Communications, *i.e.* roads, railways and navigable canals, which facilitate the transport of grain to the markets and railway stations.

(*b*) Proximity to sea-ports and markets which facilitate the export and disposal of grain.

(*c*) Healthiness of the locality.

(*d*) Immunity from damages to crops by wild animals.

Villages which are more advantageously placed than others in the above respects are placed in the first group and the remainder in the second group, not more than two being generally allowed for dry lands unless and otherwise sanctioned by the Board of Revenue in special cases.

21. When the resettlement results in an increase of more than 25 per cent in the assessment payable on any individual patta, the increment will be spread over a series of years. This concession is called 'increment remission'. If the increase of assessment in the individual cases exceeds 25 per cent of the old assessment, an amount equal to the old assessment plus 25 per cent thereof will be levied at once and the remainder by annual increments equal to 12½ per cent of the old assessment. Increment remission will not be granted when the total increase does not exceed Rs. 3 (three).

22. The higher soils in lower group villages and under inferior rrigation sources may come under the same tarams as the lower soils in higher group villages or under superior irrigation sources. The grading, under the same taram, of soils differing in class and sort but possessing the same productive power is called the merging of soils.

23. Over 70% of the irrigated lands are classified as wet in the revenue accounts. In this case water rate is not charged separately. A consolidated rate of assessment is fixed including

the charge for water. The basis of charge is a share in the net produce as in the case of dry lands. For purposes of calculation, paddy is taken as the standard crop raised. Such a procedure of a consolidated charge is found to prevail only in some districts of the Bombay Province and also in Burma. For theoretical and account purposes, however, the charge for water is separated from the consolidated assessment and is shown in accounts to be credited to irrgation revenue.

24. The question of periodical revision of assessment has been the subject of comment from time to time. Even before the policy of resettlement was laid down, there was keen controversy over this matter. The principles of the existing system of settlement contemplate the right to periodical revision of the settlement rates from time to time. The right of the State to take a share in the produce of the land, involves the right to the unearned increment in such value. The assessment is the commuted value of the State's share in the produce of the land. When there is a change in the value of the produce or in the value of money itself, the assessment fails to represent the value of the State's share accurately. Further for the improvement of the economic condition of the people, the State undertakes various measures such as providing means of communication, facilities of irrigation, etc. Consequent on such measures, there is a general increase in the value of the land and its produce. It is obvious that under such circumstances, the State should be entitled to the benefit of such increase in the value of the produce of the land. The resettlement is merely a re-calculation of the State's share with reference to the variation in prices of the standard grains and taking into account the changes in the economic condition of the people. To deny this increase and to have fixed rates of revenue for all time to come regardless of changes in the value of produce or the rise and fall in agricultural income will be a needless sacrifice of revenue. As was laid down in the despatch of the Secretary of State in 1869, the system of permanent rates would involve "the surrender of such a legitimate source of revenue as the government's share of the increased value which has been conferred on the land by improved administration, the construction of the public works especially works of irrigation and railways together with the improved price of agricultural produce".

The periodical revision of assessment was not unkown under the old revenue systems in the region. Under the Hindu kings, even, when revenue was realised in grain, the State's right to re-assess the revenue from time to time was recognised. Under the Muslim administration, the grain was changed to a cash payment. It was recognized as a general rule that the money payment needed to be revised from time to time, after the lapse of a suitable term of years. Mr. Baden Powell has observed "it is impossible to assert that either by law or custom the King or Emperor was prohibited from reassessing or raising his revenue periodically."

25. Resettlement operations are not, however, conducted on any elaborate scale as the original settlement. The frame work of the settlement is not generally changed except in very special cases. The soil classification of the land is very rarely altered. So also the grain outturn is not modified. The classification of the irrigation sources is changed only where absolutely necessary. The main basis of the resettlement is the variation in the prices of the staple grains. The revision of assessment is generally based upon the increase or decrease in the recorded prices of the staple grains of the tract. For this purpose, the commutation rates adopted for the staple grains at the expiring settlement are compared with the rates deduced for the same grains from the average of their recorded prices during the twenty non-famine years preceding the year of Resettlement after making the usual deductions. Rates of assessment are however, enhanced only when there is a substantial increase in the prices. Even when such increase is made, the rates are not enhanced to the full measure of the rise in prices. The enhancement of rates bears only a small proportion to the percentage of increase in the value of the produce. The percentage of increase varied from district to district but in 1924 it was ordered that in no case the enhancement should exceed 18¾ per cent of the old rates. The object of taking only a small proportion of the increase in the value of the produce is with a view to make a liberal allowance for the increased cost of living, increased cost of cultivation and for promoting a higher standard of living to the cultivator.

26. Before framing these proposals the settlement officer takes into consideration the statistics of the land value, changes in the means of communication and the improvement in the irrigation facilities and other data bearing on the general economic conditions of the tract. Besides the study of these statistics, the Settlement Officer makes personal and critical enquiries in the village into several important particulars bearing on the economic condition of the people. He examines critically the working of the expiring settlement and its effects on the economic condition of the people. Then he also considers how far and to what extent the existing conditions will justify an enhancement of rates. The proposals are greatly influenced by his general impressions formed on personal inspection and elaborate enquiries in the villages.

27. The periodical revision of rates at Resettlement has now been abandoned from 1939. There was a gradual fall in the price of foodgrains after 1930. Though the prices were higher than the commutation rates adopted in the several districts, the increase was barely sufficient to meet the increased cost of living and also to provide for higher standard of living.

Theoretically the State's claim is said to represent half the net produce ; but in actual practice the rates finally fixed are less than this percentage. The rates are supposed to be worked out (or determined) by mathematical calculations on the basis of scientific experiments. But the actual process is subject to the consideration of several complicated and varying conditions and in such circumstances it is not practicable to secure the theoretical standard rate. At every stage, when working out the rates moderation of the incidence of the burden and not the mathematical accuracy is the guiding principle. Progressive moderation in favour of the ryot has been the key note of the policy of the Government. In regard to the outturns, actual crop cutting experiments were conducted only in the early stages of the settlement operations. Even then the experiments were restricted only to a small number of lands of good soil. It was not possible to conduct experiments on all lands. For lands of inferior soils, the outturns were estimated with reference to the results of the crop cutting experiments on lands of good soils. The results of these experiments cannot be considered as a correct standard for the future as they are likely to have been affected by the seasonal conditions of the years in which the experiments were conducted. If the experiments had been conducted in years of poor or unseasonal rainfall the outturn would have been adversely affected. This was what is said to have been the case in Nellore. There, outturns adopted as a result of the crop cutting experiments are generally lower than the actual outturns realized later on. Even under normal conditions the yield cannot continue to remain constant for all years. Hence the outturn even when based on actual experiment can be taken only as an approximate standard. In later periods of settlements the outturns were based on the estimates framed with reference to the outturns adopted in the adjacent districts. Similarly while allowing for vicissitudes of seasons, unprofitable areas, cost of cultivation, etc., liberal allowances were made, invariably. The first two items cannot admit of accurate computation while the third differs widely from field to field and from person to person. The commutation rates adopted at the settlements are generally lower than those prevailing in the year of settlement as well as of those prevailing during some years preceding the settlement. The result has been that the net produce is invariably valued at much less than the current money rates. Thus final rates adopted are less than the theoretical standard of 50 per cent.

The same principle of moderation was followed even during resettlements when the old rates were revised. The enhancements over the previous rates at the time of resettlement are restricted to a reasonable percentage of the old rates taking into account not only the rise in prices, but also other relevant factors such as economic conditions of ryots, etc. Thus after the resettlement, the proportion of assessment to the net produce is further reduced.

28. Different districts and tracts were settled and resettled at different times. Broadly speaking the continuous rise in prices during the periods of resettlement resulted in higher commutation rates being adopted in the case of the districts resettled at a later date than in the case of those which were resettled at an earlier date. As a result, the pitch of assessment varied widely in the different districts. Due to the abandonment of the resettlement operations the assessments in the several districts remained unchanged since the time of the last resettlement. Taking into consideration the recommendations of the Taxation Enquiry Commission, the Government of Andhra passed an Act to standardise the Land Revenue assessment in the year 1956. According to this Act, the rates of assessment prevailing in various tracts together with the additions shown below against each district or tract were fixed as the standardised assessments, after taking into consideration the commutation rates adopted at the resettlements and the commutation rate worked out on the basis of 20 years average prices of the years 1934-54.

SCHEDULE A

(*tracts resettled before* 1914)

1. The Kadiri taluk of the Anantapur district	An addition of two annas in the rupee, in the case of dry land and half anna in rupee in the case of wet lands.
2. The Madanapalli and Vayalpad taluks of the Chittoor district.	
3. The Cuddapah district.	
4. The Guntur district.	
5. The Kurnool district excluding the Adoni and Alur taluks.	
6. The Nellore district	
7. The Srikakulam district excluding the Bobbili, Cheepurupalli, Palakonda, Parvathipuram, Pathapatnam and Salur taluks.	

SCHEDULE B

(*tracts resettled after* 1914 *and before* 1923)

1. The Chittoor district excluding the Madanapalli and Vayalpad taluks.	An addition of one anna in the rupee in the case of dry lands and three pies in the case of wet lands
2. The Bobbili, Cheepurupalli, Palakonda, Parvatipuram, Pathapatnam and Salur taluks of Srikakulam district.	
3. The Visakhapatnam district.	

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SCHEDULE C

(*Tracts resettled after* 1923)

1. The Anantapur district excluding Kadiri taluk. 2. The East Godavari district. 3. The Krishna district. 4. The Adoni and Alur taluks of the Kurnool district. 5. The West Godavari district.	No addition.

29. The correct legal position with regard to the levy and collection of land revenue, that assessment represents the commuted value of the government's share and that assessment is made by virtue of prerogative right of the government have been clearly laid down in a recent decision of Mr. Justice Rajagoplan and Mr. Justice Ramachandra Iyer in S. Gopalan *vs.* State of Madras. Relevant portions from this decision reported in M.L.J. 1958 II at page 117 are extracted below :

> "Advocate-General conceded that the Land Revenue due is a tax and not rent. Section 3 of Act II of 1864 gave statutory authority to the levy of assessment and its collection. Explanation 1 to Article 372 of the Constitution clarified that the law in force referred to in the Article is common law as well as statute law.
>
> It is an inherent feature of the ryotwari system that the Government has a share and as stated in B.S.O.1, para 4, the assessment represents the commuted value of the government's share of the cultivation and the assessment is by virtue of the prerogative right of the government which under the law obtaining in this country it always possessed. Such being the legal basis for the assessment the procedure adopted for the levy is what is contained in B.S.Os. Section 3 of the Revenue in Recovery Act is a charging section as it imposes a liability on the land-holder to pay the assessment"

This decision explains the main features of ryotwari system of land tenures and the basis of assessment. The petitioner is a ryotwari pattadar.

30. The rise in prices by four times over the level of prices during the last resettlement has effectively diminished the share of the government to less than 1/4th and if there had been no other factor to be considered, has also lightened the incidence of assessment on the ryot by 3/4ths. Thus if a ryot had to sell a quantity of grain 'X' to pay the assessment then, he can now pay the same by selling '1/4 X'

But there are also a number of other factors like the cost of cultivation, which has outstripped in its rate, the rate of rise of the prices of foodgrains, manures and other essential articles. Further there are now also other new taxes which the farmer has to pay and which were not in existence during the period of resettlements. The effects and influences of these factors on the incidence of land revenue together with the proposals for a revision of rates will be discussed in a later Chapter.

Brief summary of the reports on settlement and resettlements made in each district together with the special conditions obtaining in it.

Different tracts in each district were settled and resettled in different years, though the principles adopted in the settlements and the resettlements of the Andhra region are the same. The rainfall, soil-fertility, agricultural practices, yields of crops along with the details of commutation rates adopted at each settlement and resettlement, the facilities of irrigation available and the water rates levied are described separately for each district in the following pages of this chapter.

ANANTAPUR DISTRICT

Introductory

Anantapur is one of the backward districts of Andhra Pradesh. It was carved out of Bellary district at the beginning of 1882. It is neither a historical nor an ethnical entity but the product of administrative convenience. It lies between 13° 40′ and 15° 15′ of the northern latitude and 76° 50′ and 78° 30′ of the eastern longitude. It is bounded on the east by Cuddapah and Chittoor districts, north by Kurnool district and on its west and south by the State of Mysore. Due to lack of irrigation facilities and its unfortunate geographical situation at the tail end of either mosoon Zones, with poor soils in more than half of its area the whole district frequently falls a prey to famine conditions. The chief rivers in the district are the Pennar and its tributaries, the Chitravati and Papagni. Another important River is Hagari, which is a tributary to Tunghabhadra. None of the hills is of any great size. The highest points in the district are Mallappakonda (3,092 feet) four miles north of Bukkapatnam and Penukonda (3,091 feet), Kundarpidurg (2,996 feet) and Madakasira hills (2,936 feet) above Sea level. But these four are situated on the country side which itself stands some 1,500 to 2,000 feet above the Sea level. The district at present consists of 10 taluks and one sub-taluk comprised in three revenue divisions as noted below:

Name of the Revenue Division	Headquarters of the Rev. Division	Taluks comprised in Rev. Division
Anantapur	.. Anantapur	.. Anantapur, Tadipatri, Gooty, Uravakonda (Independent sub-taluk)
Dharmavaram	.. Dharmavaram	.. Dharmavaram, Kalyandurg, Rayadurg.
Penukonda	.. Penukonda	.. Penukonda, Hindupur, Kadiri, Madakasira.

Penukonda is generally described as the poor man's Ooty and it is also noted for Vineyards and Pomogranates.

The district has an area of 7,388 sq. miles and a population of 1,483,591, the density of the population being 201 per sq. mile. The utilisation of the area in the district is furnished below :

	Acres
Total geographical area	47,28,329
Area of forests	4,82,795
Barren and uncultivable land	4,14,407
Land put to non-agricultural uses	2,74,930
Cultivable waste	4,36,548
Permanent pasture and other trees crops and groves not included in net area sown	26,346
Land under miscellaneous trees, etc.	34,126
Current fallows	2,90,060
Other fallow lands	2,84,713
Net area sown	24,84,404
Area sown more than once	77,498
Total cropped area	25,61,902

There are 1,577 miles of roads in the district. The particulars being as noted below :

National Highways	..	106 miles
Provincial Highways	..	253 „
Major Dist. Roads	..	624 „
Other Dist. Roads	..	157 „
Village Roads	..	371 „
Municipal Roads	..	66 „

There are 61 miles of broad gauge and 191½ miles of metre gauge railway in the district. Vajrakarur is a place, noted for diamonds, though no regular mine is now worked. About 40 years back, gold mines were worked in Ramagiri of Dharmavaram taluq and they were abandoned as not being remunerative.

2. *Soils.*—The soils of the district have been classified under six heads *viz.*, black clay, black loam, black sand and red clay, red loam and red sand. The percentages under these classifications in each taluk are given below :

Taluk	Black			Red		
	Clay	Loam	Sand	Clay	Loam	Sand
Gooty (Including Uravakonda sub-taluk)	33.2	13.1	3.0	..	11.2	39.5
Tadpatri	42.1	25.6	3.8	..	20.6	7.9
Kalyandurg	..	3.2	0.5	..	26.5	69.8
Anantapur	5.3	9.1	3.0	..	35.4	47.2
Dharmavaram	0.1	5.6	0.8	..	40.3	53.2
Penukonda	..	9.1	5.0	..	26.0	59.9
Kadiri	0.1	0.2	..	41.0	36.8	21.9
Madakasira	0.2	6.8	0.3	..	64.0	28.7
Hindupur	0.6	12.8	1.1	0.2	63.8	21.5
		Black		Mixed	Red	
Rayadurg		27		54	19	

3. *Rainfall.*—The district has the lowest rainfall in the State. The normal rainfall is 22.4″. The particulars of rain-fall during

1955-56 monsoonwise are furnished below :—

	Average rainfall (in inches)	Average rainy days
South-West Monsoon	14.00	21
North-East Monsoon	5.20	8
Winter period	0.10	..
Hot weather period	5.60	9
Total ..	24.90	38

4. *Irrigation.*—Originally the district could not boast of any productive or protective systems of irrigation projects except the Yellanur, Gooty, Singanamala, Anantapur, Dharmavaram, Bukkapatnam and Parigi tanks. The rivers in the district are torrential streams and carry water only during good rains. For most part of the year they are dry. The rivers are not provided with regular anicuts. Temporary sand dams are put up across them and river and spring channels are taken from rivers and jungle streams to irrigate considerable extents. The total extent irrigated under spring channels in the district is large (Acres 29,780). There are a number of small tanks which require several fillings for a crop to mature. They are particularly numerous in Kadiri taluk. There are certain river-fed tanks such as the Singanamala tank in Anantapur taluk fed by the Tadakaleru, the Bukkapatnam tank in Penukonda taluk and the Dharmavaram tank in Dharmavaram taluk fed by the Chitravathi, the Pargi tank in Hindupur taluq fed by the Pennar and the Kumudvati and Anantapur tank in Anantapuram taluq fed by the Pandameru. The particulars of small tanks are furnished below :

Taluk	No. of tanks with ayacuts of acres 10	20	30	Extent irrigated acres	Revenue derived Rs.
Penukonda	10	8	6	313–00	877–0–0
Rayadurg	..	..	3	72–16	237–0–0
Anantapur	2	6	1	..	..
Hindupur	23	23	20	997–12	3,113–3–0
Uravakonda	1	2	4	605–61	2,106–11–0
Kalyandurg	9	5	13	2250–61	5,812–2–0
Madakasira	13	7	6	..	..
Tadpatri	1	..	2	..	..
Kadiri	209	92	35	3194–53	12,427–8–0
Dharmavaram ..	3	4	3	8205–97	3,776–8–0

The Rayadurg taluk which is transferred from erstwhile Ballary contains a large number of tanks, wells and spring channels. The spring channels dug annually from the Hagari river irrigate a few villages on the eastern border of the taluk. There are six big tanks in the taluk. The most important of which is the Kanekal tank which is fed by water from Hagari river. The Veparalla and Vagireddipalli tanks are also river fed. The rest are rainfed.

The sources of water supply and the area irrigated therefrom in the district during the year 54-1955 are furnished below :—

Sources of water supply	Number	Area irrigated (Acs.)
1. Canals.—		
(*a*) Government	3,385	41,011
(*b*) Private	166	323
2. Tube wells.—		
(*a*) Private	48	67,466
(*b*) Government	1	
3. Wells used for irrigation purposes only:—		
(*i*) Government— ..		
(*a*) Masonary ..	785	
(*b*) Non-Masonary ..	291	
(*ii*) Private—		
(*a*) Masonary ..	29,932	
(*b*) Non-Masonary ..	27,240	
4. Wells used for domestic purposes only. ..	8,941	..
5. Wells not in use	2,312	..
6. Tanks.—		
(*i*) With ayacut of 100 acres or more.	740	77,604
(*ii*) With ayacut of less than than 100 acres.	1,497	
Other sources spring channels, etc.		21,118
Total net area irrigated		1,84,948
Percentage of net area irrgated to net area sown ..		7.4
Area irrigated more than once in the same year ..		82,727
Total gross area of crops irrigated		2,67,675

There are four medium and one major project out of which No. 1 was completed, Nos. 2 and 5 are practically completed and Nos. 3 and 4 are under progress.

1. Pennar-Kumudvathi Project in Hindupur taluk.
2. Upper Pennar Project in Dharmavaram and Kalyandurg taluqs.
3. Bhairavani Thippa Project in Rayadurg and Kalyandurg taluks.
4. Mid Pennar Project in Anantapur taluk (T.B. High Level Canal).
5. Chennarayaswamigudi Project in Kadiri taluk.

There are 1,132 oil engines and 199 electric pumps used for irrigation in this district.

5. *Cultivation.*—Paddy, Cholam, Cumbu and Korra are the chief food crops. Varagu Ragi and Samai are also cultivated on small scale. Horse-gram is widely cultivated. Groundnut and cotton are the chief commercial crops. There are cocoanut and arecanut gardens in Hindupur and Madakasira taluks. The area under food crops is 18,29,52 acres while the area under non-good crops is 8,46,356. The percentage area under food crops works up to 68.4. The areas sown at different periods are shown below :

1885 Original settlement	10,12,287
1926 Resettlement	19,45,017
1955-56 Present	26,76,308

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Agricultural practices as elsewhere follow the nature of the soil and the character of the rainfall. The cultivation commences immediately after the advent of the South-West monsoon. The rains commence in May. The agricultural implements are of the usual variety found in the Deccan districts and do not require any special mention. In lands under well irrigation two crops are invariably secured and sometimes even three. The first crop is ragi and the second crop is either paddy or cholam. The crop calender is as below :

	Sowing	*Harvesting*	*Peak Marketing*
Paddy	August-Oct.	Jan.-March.	April-June
	Jan.-February	April-June.	July.
Jowar	August.	December.	February.
	September.	January.	June.
Bajra	July-August.	December.	January-March
Ragi	June-August.	October-Dec.	Jan.-March.

Korra ..	.. August-Sept.	Nov.-January.	February
Varagu	.. August-Sept.	Nov.-Dec.	January.
Sugarcane	.. Feb.-March.	Jan.-February.	March-June.
Chillies	.. September.	March.	April-June.
Groundnut	.. July-August.	Nov.-Dec.	Jan.-February.

6. *Cost of Cultivation.*—The particulars (per acre) gathered are tabulated here under :—

	Paddy	*Cholam*	*Other dry grains*
1. Original settlement ..	18-6-0 to 9-12-8	5-2-0 to 12-8-0	5-2-0 to 2-1-0
2. Resettlement	18-2-0 to 9-12-8	5-2-0 to 2-12-0	5-2-0 to 2-1-0
3. Director of Agriculture .. Madakasira (State seed farm)	204-66	68-00	..
4. District Agricultural Officer ..	220	30-0-0	..
5. Collector	200	20-0-0	

7. *Prices.*—The average prices of few important crops at different periods have been as follows :—(per grace of 3200 M.Ms.)

	At the time of original settlement (average of 20 non-famine years.)	Resettlement (average of 20 years non-famine years.)	1945-46 (average of 10 years).	1956-57 (average of 10 years).
	Rs.	Rs.	Rs.	Rs.
Paddy ..	143	191	350	1,073
Cholam ..	152	291	..	1,537

8. *Yields.*—The gross outturn of several crops gathered from important sources are:—

	Paddy	*Cholam*
*1. Original settlement ..	1100 to 320 M.Ms.	340 to 90 M.Ms.
£2. Resettlement ..	1050 to 320 M.Ms.	340 to 90 M.Ms.

Present times

†3.	Madakasira State seed farm.	742 M.Ms.	
4.	District Agricultural Officer.	1312 M.Ms.	150 M.Ms..
‡5.	Bureau of Statistics	628 M.Ms.	83 M.Ms.
(||)6.	Officials ..	1253 M.Ms.	204 M.Ms.
(||)7.	Non-Officials ..	1284 M.Ms.	229 M.Ms.

Sources. *,£–Settlement and Resettlement records.

† Report of the Director of Agriculture.

‡ From the statistical abstract 1955-56 on the basis of random sampling method adopted.

(||),(||)From the Answers to the questionnaire.

There were scarcity conditions in the years 1802-04, 1805-07, 1824, 1884-85, 1900 and famines in the years 1833, 1854, 1866, 1876-78, 1891-92 and 1896-97 and floods in 1804, 1817 and 1851.

The particulars of remission granted during the past five years are as follows :—

F. 1362 Rs.	F. 1363 Rs.	F. 1364 Rs.	F. 1365 Rs.	F. 1366 Rs.
4,78,953	69,826	1,40,403	1,40,401	92,649

10. *Holdings.*—The total number of holdings and the area covered by them are as follows :—

Total No. of holdings	Area covered by them
2,18,971	Ac. 21,53,743

A statement showing the details of Pattas bearing different assessments is given below :

STATEMENT SHOWING THE NUMBER OF HOLDINGS OF VARIOUS VALUES HELD IN ANANTAPUR DISTRICT

Classification of holdings	SINGLE PATTAS			
	No. of holdings	Extent of holdings		Assessment
		Dry	Wet	Rs.
1. Re. 1 and less	36,893	61,378	8,536	26,669
2. Rs. 10 and less but over Re. 1 ..	69,901	4,52,679	37,157	2,54,885
3. Rs. 30 and less but over Rs. 10 ..	17,874	2,66,917	21,799	2,39,712
4. Rs. 50 and less but over „ 30 ..	4,123	1,05,192	10,521	1,17,832
5. Rs. 100 and less but over „ 50 ..	2,082	80,289	7,812	1,01,909
6. Rs. 250 and less but over „ 100 ..	500	45,018	4,848	58,754
7. Rs. 500 and less but over „ 250 ..	40	11,089	1,198	12,920
8. Rs. 1,000 and less but over 500 ..	9	779	407	783
9. Rs. over 1,000	..	..	..	..
Total ..	1,31,422	10,23,341	92,278	8,13,464

Classification of holdings	JOINT PATTAS			
	No. of holdings	Extent of holdings		Assessment
		Dry	Wet	Rs.
1. Re. 1 and less	21,398	43,894	12,990	25,688
2. Rs. 10 and less but over Re. 1 ..	46,071	5,02,951	52,324	2,18,954
3. Rs. 30 and less but over Rs. 10 ..	15,073	2,28,318	29,323	1,83,123
4. Rs. 50 and less but over „ 30 ..	2,837	72,380	8,667	78,814
5. Rs. 100 and less but over „ 50 ..	1,290	46,686	6,332	61,654
6. Rs. 250 and less but over „ 100 ..	863	26,557	3,525	34,667
7. Rs. 500 and less but over „ 250 ..	16	3,640	391	4,993
8. Rs. 1,000 and less but over 500 ..	1	246	..	545
9. Rs. over 1,000	..	..	..	..
Total ..	87,549	9,24,672	1,13,452	66,08,538

Number of Share Holders in Joint Pattas

Re. 1 and less	68,271
Rs. 10 and less	1,44,188
Rs. 30 and less	46,240
Rs. 50 and less	9,731
Rs. 100 and less	3,839
Rs. 250 and less	1,435
Rs. 500 and less	47
Rupees 1,000 and less	3
Rupees over 1,000	..
	2,73,754

11. *Features of the original settlement.*—Settlement was carried out in different periods in the three tracts of the district.

1. Gooty and Tadpatri.
2. Kalyandurg, Anantapur, Dharmavaram and Penukonda.
3. Hindupur and Madakasira.

The original settlement was introduced in Gooty and Tadpatri taluks in Fasli 1301 (1891-92) in the four central taluks of Anantapur, Kalyandurg, Dharmavaram and Penukonda in Fasli 1306 (1896-97) and in Hindupur and Madakasira taluks in Fasli 1307 (1897-98).

(*a*) The soils were divided into two main series regar and red ferruginous, and was again subdivided into three classes, (clay, loam and sand) and each into five sorts, *viz.*, (*i*) best (*ii*) good, (*iii*) ordinary, (*iv*) inferior and (*v*) worst.

(*b*) Irrigation sources were grouped mainly according to the character of the supply but none of them was actually placed in the first group. (*c*) For the purpose of dry assessment all the taluks were placed in a single group. (*d*) Paddy was taken as the standard crop for wet lands in the tracts, and for dry lands, Cholam in Gooty and Tadpatri taluks, Ragi and Horsegram in Hindupur and Madakasira taluks and Cholam and Horsegram in Anantapur, Kalyandurg, Dharmavaram and Penukonda taluks were taken as standard crops. (*e*) The commutation rate of paddy worked out to Rs. 139, 117 and 118 a garce respectively for the three tracts after making a deduction of 15% on account of cartage and merchant profits. The commutation rate of Cholam worked out to Rs. 135 and 129 a garce respectively in Gooty, Tadpatri and other tracts. The commutation rate of Ragi worked out to Rs. 100 a garce in Hindupur and Madakasira taluks. The cultivation expenses per acre were Rs. 18-6-0 to 9-12-8 for paddy, Rs. 5-2-0 to 2-8-0 for Cholam and Rs. 5-2-0 to 2-1-0 for other dry grains. (*f*) A deduction of 25% was made on account of vicissitudes of season and the inclusion of unprofitable areas in the holdings of ryots in the case of both wet and dry lands. (*g*) The rate of assessment ranged from Re. 1 to Rs. 8-8-0 an acre for wet and annas 2 to Rs. 2 an acre for dry lands.

Kadiri Taluk

This taluk was originally in Cuddapah district and was included in Anantapur district in 1910. The scheme for original settlement was sanctioned in G.O. Ms. No. 939, dated 9th August 1880 and the rates were introduced in Kadiri taluk in F. 1292 (1882). The highest and the lowest dry rates in that district were Rs. 3 and annas four respectively. The highest and the lowest wet rates were Rs. 9 and 2 respectively. The soils were classified under the two main classes of Regada or black and ferruginous or red. Wet lands were arranged in five groups with reference to the quality of sources from which it was irrigated.

Rayadurg Taluk

This taluk was originally in Bellary district. It was transferred to Anantapur district on 1-10-1953 on the formation of Andhra State. Rayadurg taluk was included in the tract constituting Hospet, Hadagali, Harpanahalli, Kudligi and Rayadurg. The scheme for the settlement of above tract was sanctioned in G.O. No. 358, dated 1st May 1893. The rates were introduced in Rayadurg taluk in Fasli 1303 (1893). The soils of the district of Bellary was grouped under regar or black, ferruginous or red. For the purpose of fixing the money rates the standard crop on wet land was taken to be paddy and on dry land, Cholam. The dry rates ranged from two annas to Rs. 2-4-0 and wet rates from Re. 1 to Rs. 11.

12. *Resettlement.*—The resettlement in Anantapur district was done in four tracts. They were Black cotton soil taluks of Gooty and Tadpatri, (2) Red soil taluks of Anantapur (16 villages of Gooty transferred to Anantapur taluk, Kalyanadurg, Dharmavaram, Penukonda and Hindupur), (3) Kadiri taluk transferred from Cuddapah district, (4) Rayadurg taluk transferred from Bellary district.

In the first tract the scheme for the resettlement was sanctioned in G.O. No. 1332, Revenue, dated 21-7-1922 and the rates were introduced in F. 1333 (1923-24). In the second tract the scheme was sanctioned in G.O. No. 2070, Revenue, dated 3-12-1926 and the rates were introduced in Fasli 1336 (1926-27) in Kalyanadurg, Penukonda, Dharmavaram and Anantapur and in Fasli 1337 (1927-28) in Hindupur and Madakasira taluks. In the third tract (Kadiri taluk) the scheme was sanctioned in G.O. No. 1968, Revenue, dated 28-11-1911 and the rates were introduced in Fasli 1323 (1913-14). In the fourth tract (Rayadurg taluk in Bellary district) the scheme was sanctioned in G.O. No. 1332, Revenue, dated 21-7-1922 and the rates were introduced in Fasli 1334 (1924-25).

General Features of the Resettlement

The resettlement was based mainly on the rise in the prices of staple foodgrains since the last settlement.

Soil Classification

There was no revision of general classification of the soils, except the usual changes that are effected in resettlements.

Wet Lands.—The classification of sources was introduced at the time of resettlement. A few tanks came into existence subsequent to the original settlement, *viz.*, Ralla Anantapuram Manirevu and Pallur in Kalyandurg taluk and Padamati yaleru in Anantapur taluk. In Ramapuram and Karthanaparthi villages new tanks were constructed. The lands which in all ordinary seasons have an unfailing supply of water for two wet crops were registered as double crop at one and a half times the single crop wet assessment irrespective of the classification assigned to the irrigation source. As regards the voluntary composition of the second crop charge, the following rates were adopted.

Classification	Rates of composition adopted in the tract
2	1/3rd of the first crop charge.
3	1/3rd do
4	1/4th do
5	1/4th do

Where the supply was supplemented by wells these rates were reduced by one-half even in the case of lands under second class sources. The composition was at one-half of these rates if the supply is supplemented by wells only in the case of lands under third, fourth or fifth class sources.

Standard Crop and Outturn

Paddy had been taken as standard crop on wet lands and yellow Cholam has been taken as standard crop on dry lands in black cotton soil taluks ; Cholam and Horsegram and Ragi have been taken as standard crops in other taluks. The resettlement commutation rates were determined with reference to the average prices of the standard crops during the 20 non-famine years immediately preceding the commencement of resettlement operations. On the average of 20 non-famine years (1903-04 to 1922-23) the commutation price of cholam comes to Rs. 338 a garce and of horsegram Rs. 376. The commutation price of paddy comes to Rs. 276 against 138 at the last settlement. Deducting 15% on account of cartage and merchant profits the net commutation rates come to Rs. 235 a garce against Rs. 117 at the last settlement in the case of paddy, Rs. 287 against Rs. 129 in the case of Cholam and Rs. 320 against Rs. 135 in the case of horsegram. These rates represent an increase of 10 per cent in the case of pady, 122 per cent in the case of Cholam and 137 per cent in the case of horsegram. In the taluks of Hindupur and Madakasira the commutation price of paddy works to Rs. 303 a garce and those of Ragi and Horsegram to Rs. 316 and Rs. 363 respectively. Deducting 15% on account of cartage and merchants' profits the net commutation rates are Rs. 258 for paddy, Rs. 269 for Ragi and Rs. 309 for horsegram which represent an increase over the commutation rates of 119 per cent, 169 per cent and 136 per cent respectively.

A comparative statement of the money rates as at the first and second resettlement is given below :—

GOOTY AND TADPATRI

WET						DRY					
First settlement			Second settlement			First settlement			Second settlement		
Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
11	0	0	10	2	0	2	8	0	2	13	0
10	0	0	9	0	0	2	0	0	2	4	0
9	0	0	7	14	0	1	8	0	1	11	0
8	0	0	6	12	0	1	0	0	1	2	0
7	0	0	5	10	0	0	12	0	0	14	0
6	0	0	4	8	0	0	8	0	0	9	0
5	0	0	3	6	0	0	6	0	0	6	0
4	0	0	2	13	0	0	4	0	0	4	0
3	0	0	2	4	0	0	2	0	0	2	0
2	8	0	1	11	0		..			..	
2	0	0	1	2	0		..			..	
1	8	0		..			..			..	
1	0	0		..			..			..	

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KALYANDURG, DHARMAVARAM, ANANTAPUR, PENUKONDA, HINDUPUR AND MADAKASIRA

WET			DRY	
First settlement	Second settlement		First settlement	Second settlement
(1)	(2)		(3)	(4)
Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.
	16 villages of Gooty transferred to Anantapur	Other taluks		
8 8 0	12 2 0	9 9 0	2 0 0	2 0 0
8 0 0	9 0 0	9 0 0	1 8 0	1 8 0
7 0 0	7 14 0	7 14 0	1 0 0	1 0 0
5 8 0	6 12 0	6 3 0	0 12 0	0 12 0
4 8 0	5 10 0	5 1 0	0 8 0	0 8 0
3 8 0	4 8 0	3 15 0	0 6 0	0 6 0
2 8 0	3 6 0	2 13 0	0 4 0	0 4 0
2 0 0	2 13 0	2 4 0	0 2 0	0 2 0
1 8 0	2 4 0	1 11 0	..	..
1 0 0	1 11 0	1 2 0	..	..
..	1 2 0	..	..	..

KADIRI

WET		DRY	
First settlement	Second settlement	First settlement	Second settlement
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
9 0 0	9 0 0	3 0 0	2 0 0
8 0 0	8 0 0	2 0 0	1 8 0
7 0 0	7 0 0	1 8 0	1 4 0
6 0 0	6 0 0	1 4 0	1 0 0
5 0 0	5 0 0	1 0 0	0 12 0
4 0 0	4 0 0	0 12 0	0 8 0
3 8 0	3 8 0	0 8 0	0 6 0
3 0 0	2 8 0	0 6 0	0 4 0
2 8 0	2 0 0	0 4 0	..
2 0 0	..	..	..

RAYADURG

(1)			(2)			(3)			(4)		
Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
11	0	0	13	0	0	2	4	0	2	8	0
10	0	0	11	4	0	1	12	0	2	0	0
9	0	0	10	10	0	1	0	0	1	2	0
8	0	0	10	2	0	0	12	0	0	14	0
7	0	0	9	8	0	0	8	0	0	9	0
6	0	0	9	0	0	0	6	0	0	6	0
5	0	0	8	4	0	0	4	0	0	4	0
4	0	0	7	14	0	0	2	0	0	2	0
3	0	0	7	2	0		..			..	
2	8	0	6	12	0		..			..	
2	0	0	5	15	0		..			..	
1	8	0	5	10	0		..			..	
1	0	0	4	12	0		..			..	
	..		4	8	0		..			..	
	..		3	6	0		..			..	
	..		2	13	0		..			..	
	..		2	4	0		..			..	
	..		1	11	0		..			..	
	..		1	2	0		..			..	

13. *Estate Abolition Act.*—The survey and settlement operations in the shortrium villages taken over by the Government under the Estates (Abolition) Act, 1948 are under progress. There were no estates to be taken over in this district.

CHITTOOR DISTRICT

Introductory

General Features.—Chittoor district was constituted out of the old North Arcot district on 1st April 1911. It comprises the taluqs of Chittoor, Palamaner and Chandragiri transferred from the old North Arcot district of Madras State and of Madanapalli and Vayalpad transferred from the old Cuddapah district as well as the *ex*-zamindaries of Punganur, Kalahasti, Puttur and Tiruttani (old Karvetinagar Estates) ; Kangundi (Kuppam) taluq of North Arcot district with the exception of 22 villages was transferred to the Chittoor district from 1st December, 1928 and added to the Palamaner taluq of Madanapalle Division. Further, eight villages which were enclaves of Mysore State were transferred to the Palamaner taluq of this district with reference to the exchange of enclaves under the Provinces and States (Absorption of Enclaves) Order, 1950.

The district is situated between 12° 37′ and 14° 0′ of the northern latitude and 78° 3′ and 79° 55′ of the eastern longitude. It is bounded on the North by the Anantapur, Cuddapah and Nellore districts, on the east by Nellore district and Chingleput district of Madras State, on the South by the North Arcot district of Madras State and on the west by the Mysore State and Salem district of Madras State. The district covers an extent of 5,890 sq. miles. The abolition and taking over of the Zamindari areas by the Government under the Madras Estates (Abolition and Conversion into Ryotwari) Act, 1948 commenced in F. 1359 (1949-50). The 6 villages of Venkatagiri Estate lying in Kalahasti taluq were taken over on 7-9-1949. In the second batch, most of the remaining estates in the district (Zamin and under tenure) were taken over on 7-9-1950. They contain numerous small sources of irrigation. There are no big rivers in the western part of the district. The Papagni rises in the Mysore territory and runs through the Madanapalle taluq of this district, and the Kadiri taluq of Anantapur district having a considerable amount of wet cultivation on its banks, as there is usually some water in it all the year round. It forces its way through the Palakonda Range at Vemupalle and finally falls into the Pennar. In the area traversed by these rivers, there are numerous tanks which are fed by them. Many of the tanks are large and well built. There are only a few wells in this area. Owing to the inumerable hills, in the Eastern portion of the district, there are very many jungle streams. In the Chittoor taluq and parts of Chandragiri taluq, these streams drain into Poiney, a tributary of the Palar. The Poiney river rises in the Chittoor taluq and joins the Palar in Tiruvalam village in the North Arcot district. The Swarnamukhi river drains nearly the whole of the Chandragiri taluq and a portion of the Kalahasti Zamindari after flowing through a comparatively open portion of the Chandragiri division and passes into the Nellore district. This river in its lower course has generally some water in it all times of the year. The area drained by it has a rich soil and is favoured by numerous springs and a high level of sub-terranean water. Similar conditions prevail in the Karvetinagar Zamindari which is drained for the most part by the Kusathalis the Arni and Nandi rivers flowing eastwards into the Chingleput district of Madras State. The lands lying on the banks of these rivers are very fertile. A large part of the western portion of the division is covered with forests. These forests extend more or less continuously over the whole of the eastern part of the Vayalpad and northern part of the Chandragiri taluq. The forests are rich in secondary timber of which black wood, red sanders and Yepi (hard wickia binata) are the most important. The Avulapalle forest in Punganur Zamindari is rich in bamboo growth.

There are numerous hillocks in the Plateau taluqs of Madanapalle, Palamaner, Punganur and Vayalpad and in the eastern taluqs of Kalahasti Puttur and Tiruttani. The most prominent of them are the Horesely Hill (4,100 ft.) in Madanapalle taluq and the Nagari Hills in Puttur taluq.

The important pilgrim towns in the district are Tirupati, Kalahasti and Tiruthani. Chandragiri is a historical place, Puttur and Narayanavanam are important weaving centres, Kuppam is important for its Sandalwood oil and quilt industries. Tirupati and Chittoor are the two Municipalities in the district.

The district is served by $68\frac{1}{4}$ miles of broad-gauge and $165\frac{1}{2}$ miles of metre-gauge railway. There are 1,766 miles of roads in the district consisting of 54 miles of National Highways, 121 miles of State Highways and 560 miles of Major district roads, 1,009 miles of District Board roads and 22 miles of Municipal roads.

The land utilization of the area in 1955-56 is as follows:—

		Acres
	Total geographical areas	37,69,290
1.	Area of forest	11,97,004
2.	Barren and uncultivable land	4,18,018
3.	Land put to non-agricultural use	1,49,997
4.	Cultivable waste	3,64,438
5.	Permanent pastures and other grazing lands	80,537
6.	Trees, miscellaneous crops and groves	65,263
7.	Current fallows	4,15,275
8.	Other fallow lands	1,19,108
9.	Total area sown	10,87,493
10.	Area sown more than once	1,27,843
11.	Net area sown	9,59,650

2. *Soil.*—There are three classes of soils, Regada (black) Lal (Red) and Mussab (Mixed). Black soil is again subdivided into clayey, loamy, and sandy, and red soil into loamy and sandy. The major part of the soil is of the red series. There is much fertile red loam in the Karvetinagar area. Punganur on the Mysore plateau offers the same characteristics as the adjoining ryotwari taluqs of Palamaner and Madanapalle. The soil of the Kalahasti estate situated in the district resembles that of the eastern portion of the Chandragiri taluq, though it is perhaps slightly inferior.

3. *Rainfall.*—Roughly speaking the South-West monsoon is more copious than the North-East on the plateau and in the central parts of the district, while North-East monsoon is more copious than the South-West in the Kalahasti and Karvetinagar Zamindaries *i.e.*, the eastern parts of the district which are nearer and more open to the Bay of Bengal. The average rainfall of the district taken as a whole based on the records of the past 80 years ending with 1949 is 33.81 inches. The district is served by both the North-East and South-West monsoons. The plateau taluks of Madanapalli, Vayalpad, Punganur and Palamaner get more rains during South-West Monsoon (June to September) than during the North-East Monsoon (October to December). The district being situated in the interior of the Peninsula the monsoon clouds get thin when they reach the district. The rainfall has never been less than 20 inches in the district since 1876, the year of the great famine, when it was only 13.09 inches. It was only in 1904 and in 1947, that the average rainfall of the district was 20.21 and 20.10 inches respectively. In only 7 years during the 74 years that elapsed since 1876, has the rainfall been less than 25 inches and only in thirteen other years was it 25 inches and above but below 30 inches.

4. *Irrigation.*—The following statement shows the irrigation sources and the area irrigated in the district:

	Source		No.	Area irrigated Acres
1.	Government canals		574	8,319
2.	Private canals		16	151
3.	Tanks with an ayacut of Acres 100 and more	1,336	6626	1,76,460
	Tanks with an ayacut of Acres 100 and less	5,290		
4.	Wells			
	(*a*) Sole irrigation		19,449	1,00,608
	(*b*) Supplementing other source of irrigation. ..		49,180	18,585
5.	Other sources (spring channels, etc.) ..		466	31,662
6.	Total net area irrigated			3,17,200
7.	Percentage of net area irrigated to the net area sown. .			39.5%
8.	Area irrigated more than once in the same year. ..			94,668

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Source	No.	Area irrigated Acres
9. Total gross area of crops irrigated		4,11,868
10. Percentage of the total gross irrigated area to the total area sown.		37.8%
11. No. of wells having independent ayacuts		25,981
12. No. of wells supplementing recognised source of irrigation.		43,746
13. Percentage of area irrigated by wells having independent ayacuts to the total area irrigated.		29.7%

Three out of the 17 medium projects in the Andhra area are in this district (1) Mallimadugu reservoir (2) Kalingi reservoir (3) Siddalagandi.

Channels taken from the rivers of the district, *viz.*, the Swarnamukhi, the Poiney, the Bahuda, the Papagni, the Pincha and their tributaries irrigate in normal rainfall season of a fairly large area and may be expected to protect the crop on a small portion of the ayacut in the adverse seasons. Irrigation by wells is largely developing and affords considerable protection.

Dasabandam Tanks

A dasabandam inam is a grant of land or of Revenue as a compensation for the construction of a tank, well or channel. The grant generally, though not invariably, carries with it the condition of maintaining it. If the inam consists of land, it is called "Khandam Dasabandam". If it is an assignment of revenue, it is called "Shamilat dasabandam"

There are innumerable dasabandam tanks in this district under both the categories *viz.*, "Khandam and "Shamilat". The dasabandamdars who fail to carry out repairs when called upon by the Collector are deprived of the inam right by resumption. There are a few cases of dasabandam wells also. These wells are generally maintained by the dasabandamdars themselves. The dasabandamdars are entitled to ¼ share in the Teerva Jasthi and Fasli Jasthi derived under the sources concerned (*vide* B.S.O. 56). All 'Khandam Dasabandam Inams' have to be resumed under the conversion of inams into ryotwari Act 1956. They have already been fully assessed under the Andhra Inams Abolition and Conversion to

Ryotwari Act. Only formal resumption under the conversion of inams into Ryotwari Act remains. A special staff has been appointed for this purpose.

The above Act does not apply to 'Shamilat Dasabandam' lands.

Irrigation under Palar River Basin

The River Palar enters Chittoor district from the Mysore State and flowing through Kangundi *Ex*-Zamin Estate for a distance of about 20 miles passes out into the North Arcot district of the Madras State. Though the course of the river in the district is short, it has a fairly wide basin in the district covering vast portions in the taluks of Palamaner, Punganur, Madanapalle, Chittoor and Chandragiri.

On the ground that the Palar system is already burdened with the irrigation of an area beyond its capacity and that to allow further additions would aggravate difficulties of the situation, the Government of the composite Madras in G.O. No. 1617-I dated 19-6-1931, directed that

(*i*) No new irrigation works should be constructed in the Palar Basin;

(*ii*) No extension of the existing works should be undertaken with the object of increasing the amount of water impounded or drawn off by them.

(*iii*) No dry land in the Palar Basin should be transferred to and registered as wet;

(*iv*) No single crop wet land should be registered as double crop wet; and

(*v*) The charge for a second crop on any wet land should not be compounded.

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There are also orders prohibiting the grant of permission for the construction of new wells in the Palar Basin area. This restriction was relaxed in G.O. Ms. No. 2549, Revenue, dated 30-9-1939 communicated with B.P. Ms. No. 2964, dated 17-10-1939 subject to the condition that the Public Works Department should be consulted before a loan is granted for the sinking of wells on private lands or before a well is sunk on land at the disposal of the Government. The Government also relaxed in G.O. No. 2240, Revenue, dated 11-12-1933, the ban against raising second crop on the existing single crop land and a third crop on the existing double crop lands. Again in the year 1946, the rules were further relaxed temporarily for a period of 5 years in G.O. 3985, P.W.D., dated 6-10-1948 and sinking of wells and tube wells to irrigate dry lands in the basin and the extension of irrigation of dry lands after a favourable North-East Monsoon were allowed. This relaxation was extended till 5-10-1955, in G.O. Ms. No. 1597 P.W.D., dated 9-4-53. The question was further examined in the year 1956 and the Government, in G.O. Ms. No. 992, dated 9-4-1956, directed that the temporary relaxation of Palar Basin rules already in force should be continued for a further period of five years, *i.e.*, till 5-10-1960. The Government also directed that new works should not be constructed but where any tank or irrigation work is not in proper working order, it can be restored to its original condition.

5. *Cultivation.*—The best part of the year for agricultural operations in a normal year is July to October. Moderate rains in June and July are quite essential for ploughing up of wet and dry lands on a large scale. Heavy and excessive rains during August and September will help wet cultivation but affects dry crops sown during the months. Absence of rain between July and September greatly affects the plateau taluqs of Madanapalle and Vayalpad where their chief food crop, cumbu is likely to be a total loss. Moderate rainfall during October and November is beneficial to the standing crops. Dry crops are harvested during these months. Heavy rain during December affects sowing of paddy and spoils the harvests. But showers are necessary in December to January to refresh dry and wet crops standing on ground.

Under wells, particularly in Chandragiri division, paddy crop is raised in all the seasons. One may see the paddy crop in all the stages in different portions irrigated from a mota well worked by bullocks.

Generally no rotation of crops is being followed in this district. During a normal year when there is adequate supply in the irrigation sources, only paddy crop will be raised successively during both the seasons. In times of inadequate supply, paddy crop will be followed by Ragi or Jowar which require watering.

Of the total cultivable area of 18,89,819 acres, 8,76,798 acres or 46 per cent were cultivated in the normal year during the decennium ending 1950-51. There was drought for five years continuously in this decade. The area cultivated in a year on average in the last decennium was 8,12,122 acres. The area cultivated during the year 1955-56 (F. 1365) was 10,87,493 acres.

Cumbu is the chief food crop in Vayalpad and Madanapalle taluqs and paddy is the chief food crop in other parts of the district. Ragi is another important food-crop used throughout the district.

Among pulses, the area under Horsegram (3,31,517 acres) was nearly 3.8 times that of the others (Ac. 8,313). It was largely grown in Chittoor, Palamner, Madanapalle and Vayalpad taluqs. Pulses are generally sown in dry lands in this district.

The area under fruits and vegetables is the largest in Chittoor taluq. The area under condiments and spices is the largest in Madanapalle taluq. Paddy, Ragi and Bajra (Sajja) produced in the district were barely sufficient for local requirements and rice was imported from outside.

The important commercial crops in this district are groundnut and sugarcane. The jaggery manufactured in Chittoor is said to be of good variety. Among the fruit bearing trees, mango and tamarind are worth mentioning. Groundnut, jaggery, mango and tamarind were exported on a large scale and they are really the money-producing crops. Cotton and tobacco are grown on a very small scale.

Among the oil seeds, castor was grown on a large scale in the plateau taluqs of Madanapalle and Vayalpad. In Chandragiri, Kalahasti and Puttur taluqs, the extent under gingelly is larger than in the other taluqs.

6. *Cost of cultivation.*—The particulars gathered are tabulated below:

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		CHOLAM		SAJJA	
Source & Year	Paddy	Irrigated	Dry	Irrigated	Dry
		DRY GRAINS			
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
1. Settlement scheme reports original resettlement 1881-1914	11 15 6 to 8 0 0	Dry grains 4 1 4 to 2 9 6			
2. Director of Agriculture					
By Motor	175.25				
By oil engine ..	285.25				
3. Collector	442.50	194.60	63.25	149	50.25

Source and year	Ragi Irrigated	Ragi Dry	Groundnut Irrigated	Groundnut Dr	Sugarcane
	(7)	(8)	(9)	(10)	(11)
	Rs.	Rs.	Rs.	Rs.	Rs.
1. Settlement scheme reports Original resettlement 1881-1914	Under dry grains	..	..	..	..
2. Director of Agriculture:					
By Motors			169.50	156.25	131.25
By oil engine.					
3. Collector ..	206.50	61.25	185	77	635

7. *Prices.*—The average prices of few important crops at different periods have been as follows :—

PER GARCE OF 3200 M.Ms.

Products	Original settlement 1881-82	Resettlement 1911-1914	1945-46 previous 10 years' average	1956-57 10 years' average
	Rs.	Rs.	Rs.	Rs.
Paddy	168	184	334	1282
Sajja	205	215	..	1841
Ragi	..	197	..	1287

8. *Yields.*—The gross outturns of several crops gathered from important sources are :—

Source	Paddy	Cholam	Sajja	Ragi
1. Settlement reports	1200 to 400	..	300-80	360-120
2. Director of Agriculture ..	900		..	533
*3. Bureau of Economics & Statistics.	719	141	167	170
†4. Officials	1557	..	..	699
†5. Non-Officials	1289	778	293	531
6. Collector 1956-57	1448	Irrigated 752 Dry 70	Irrigated 329 Dry 165	Irrigated 823 Dry 219

Sources:— †From the answers to the Questionnaire.
*From Statistical Abstract for 1955-56 on the basis of Random sampling method.

Paddy straw yield 2500 lb. per acre	As estimatedby the Director of Agriculture.
Ragi straw yield 2500 lb. per acre	

Paddy straw yield 2000 lb. per acre	As estimated by the Collector.
Ragi straw yield 1200 lb. per acre	
Sajja straw yield 1200 lb. per acre	
Jonna straw yield 1600 lb. per acre	

9. *Seasonal conditions.*—In the year 1807 the season was unfavourable. In 1820 severe storms in May were followed by the failure of rains. In 1823 there was prolonged distress and relief was given. The year 1832-33 was one of un-precedented scarcity. In 1860 there was a partial famine but great distress was averted by copious though late rains. The great famine of 1876-78 was severely felt in this district, particularly in Madanapalle. and Vayalpad taluqs. In 1891-92 severe distress was felt in various parts of the district.

The district was in the grip of famine from F. 1339 onwards. The condition became worse year by year. The district has been continuously experiencing adverse seasonal conditions ever since 1947-48, *i.e.*, F. 1357.

Statement showing particulars of remissions granted in Chittoor District from F. 1362-1366.

		Rs. a. p.
Fasli 1362	..	5,04,144-12- 7
Fasli 1363	..	78,999- 8- 3
Fasli 1364	..	61,592- 0-10
Fasli 1365	..	1,24,218- 9- 2
Fasli 1366	..	47,668- 2- 1

10. *Holdings.*—This is a district of small holdings. On the whole there are 3,11,333 holdings covering an area of 10,61,177 acres. The average size of the holding is:

Acres 4.77 comprising of wet acre 1.00 and dry acres 3.77.

[*Statement.*

STATEMENT SHOWING THE NUMBER OF VARIOUS VALUES OF HOLDINGS IN CHITTOOR DISTRICT

The details regarding the sizes of holdings :—

	SINGLE HOLDINGS			
		EXTENT		
	No. of holdings	Dry Acres	Wet Acres	Assessment Rs.
One rupee and less	7,061	46,957	8,338	57,306
Rs. 10 and less but over Re. 1 ..	1,21,937	2,05,449	55,222	4,46,000
Rs. 30 and less but over Rs. 10 ..	25,765	95,697	46,935	3,34,274
Rs. 50 and less but over Rs. 30 ..	5,817	37,590	20,499	1,48,719
Rs. 100 and less but over Rs. 50 ..	2,167	23,575	15,632	1,12,097
Rs. 250 and less but over Rs. 100 ..	549	16,761	11,246	73,949
Rs. 500 and less but over Rs. 250 ..	47	3,833	2,470	10,952
Rs. 1,000 and less but over Rs. 500 ..	2	197	131	1,100
Over Rs. 1,000	..	..	..	..
Total ..	1,63,345	4,30,059	1,60,473	11,84,237

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	JOINT HOLDINGS				
			EXTENT		
	No. of holdings	No. of share holders	Dry Acres	Wet Acres	Assessment Rs.
One rupee and less ..	45,475	1,44,214	27,719	7,191	38,062
Rs. 10 and less but over Re.1	80,878	2,23,854	2,18,731	29,867	3,16,193
Rs. 30 and less but over Rs.10	17,401	56,576	76,483	24,275	1,95,789
Rs. 50 and less but over Rs.30	2,919	8,998	28,717	8,861	68,596
Rs. 100 and less but over Rs.50	1,065	3,219	18,389	6,703	44,480
Rs. 250 and less but over Rs.100	216	941	10,920	4,497	27,160
Rs. 500 and less but over Rs.250	27	98	2,455	1,737	7,011
Rs. 1,000 and less but over Rs.500	7	26	2,603	497	3,587
Total ..	1,47,988	4,37,926	3,87,017	83,628	7,00,878

11. *Settlement.*—For the purpose of settlement and resettlement, this District was divided into two tracts. The first tract consists of Vayalpad and Madanapalli taluks and the second tract consists of Chandragiri, Chittoor and Palamaner taluqs. The settlement and resettlement of the first tract was done in 1882 and 1911 respectively and of the second tract, in 1881 and 1913. Some of the important features of the original and resettlement in the district are given below:

Features of the Original Settlement

Both wet and dry lands, with the exception of small area as "permanently improved", were classified under the two main series of regar and red ferruginous.

The villages were divided into dry groups with reference to their distance from markets, facilities of communication, rainfall and other facilities for dry cultivation. In case of wet lands, grouping of villages was done with reference to the general nature and quantum of water available for irrigation in each village. Cumbu, Ragi and Varagu were taken as standard crops for dry and paddy for wet lands.

The grain outturns per acre, determined, ranged from 400 to 1200 M.Ms. of paddy in wet lands and from 120 to 360 M.Ms. of ragi and 80 to 340 of cumbu in dry lands.

The cultivation expenses per acre ranged from Rs. 8 to 11-15-6 for wet crop and from Rs. 2-9-6 to 4-1-4 for dry crops.

A deduction of 20 to 25% of the yields was allowed for the vicissitudes of season and unprofitable areas. In the original settlement of Chandragiri, Chittoor and Palamanair taluks a deduction of 10% was made for merchants' profits.

A special rate of Rs. 1-8-0 was charged for lands made over to the ryots under ruined sources to be restored by private enterprise.

The money rates ranging from Rs. 1-8-0 to 18-2-0 for wet land and from annas 4 to Rs. 3-8-0 for dry lands were fixed.

12. *Features of Resettlement.*—No general reclassification of soils was undertaken, except those transferred from poramboke and unassessed to assessed since the last settlement.

The grouping of villages in respect of dry lands adopted at the original settlement remained unaltered.

At the original settlement the irrigation sources were not classified, but the villages were divided into groups according to the general nature and capacity of the irrigation sources in each group of villages. As this system of grouping of irrigation sources was inelastic, all sources of irrigation were classified into four classess according to their condition and capacity. Thus the system of wet grouping of villages which was in force at the original settlement was abolished.

The allowance of 12% made for merchants' profit, at the original settlement, was increased to 15%.

At the resettlement of Vayalpad and Madanapalli taluks, the commutation rates for the staple food crops arrived at were the same as that arrived at in the original settlement. The allowances for cultivation expenses, for the vicissitudes of season and unprofitable areas remained unaltered. The outturns of the standard grains were also left unaltered. Therefore, there had been no change in the table of money rates for both wet and dry lands. In the resettlement of Chandragiri, Chittoor and Palamanair taluks, the commutation rates of standard grains arrived at were somewhat higher than those arrived at in the original settlement. Hence the money rates were recommended for enhancement by 25% for the wet lands on the three highest tarams and 12½% on all dry tarams. But the Government after taking into account the reclassification of the irrigation sources have considered that the enhancement of wet rates by only 12½% would be adequate.

MONEY RATES—ALL TALUKS EXCEPT MADANAPALLI AND VAYALPAD.

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	WET RATES		DRY RATES		
Taram	Chittoor and Chandragiri.	Palmaner	Chittoor and Chandragiri	Palmaner	Remarks
	Rs. a.	Rs. a.	Rs. a.	Rs. a.	
1.	10 0	8 6	2 8	2 4	Scheme sanctioned in G.O. No. 538 Rev., dated 18th Feb. 1914.
2.	9 6	7 12	2 0	1 12	
3.	8 12	7 2	1 8	1 6	
4.	8 2	6 8	1 0	1 0	
5.	7 8	6 0	0 12	0 12	
6.	6 14	5 6	0 8	0 8	
7.	6 9	5 0	0 6	0 6	
8.	6 4	4 12	..	..	
9.	5 15	4 8	..	..	
10.	5 10	4 2	..	..	
11.	5 5	3 14	..	..	

Taram	WET RATES Chittoor and Chandragiri	 Palmaner	DRY RATES Chittoor and Chandragiri	 Palmaner	Remarks
	Rs. a.	Rs. a.			
12	5 0	3 8	..	..	Rates introduced in Chittoor and Chandragiri in fasli 1324(1914-15.)
13	4 11	3 0	..	..	
14	4 6	2 6	..	..	
15	4 1	..	..	..	
16	3 12	..	..	..	
17	3 2	..	..	..	
18	2 8	..	..	..	Rates introduced in Palmaner in fasli 1325 (1915-16.)

MONEY RATES—MADANAPALLE AND VAYALPAD TALUKS

Taram	Wet rates	Dry rates	Remarks
	Rs. a.	Rs. a.	
1	9 0	2 0	Scheme sanctioned in G.O. No.1968 Rev., Dated 28th June 1911.
2	8 0	1 8	
3	7 0	1 4	
4	6 0	1 0	
5	5 0	0 12	Rates introduced in Vayalpad in fasli 1322 (1912-13)
6	4 0	0 8	
7	3 8	0 6	
8	3 0	0 4	
9	2 8	..	Rates introduced in Madanapalle in fasli 1323 (1913-14)
10	2 0	..	

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13. *Settlement of Estates taken over under Madras Estate Abolition Act*, 1948.

Tiruttani taluk

The entire taluk was an estate area, and comprised the following estates:

1. Tirupati-Tirumalai Devasthanam estate;
2. Chettinad estate;
3. Karvetinagar Trust estate;

4. Unregistered portion of Karvetinagar zamin estate;
5. Develampet estate;
6. Minor estates.

The total extent of the above estates situated in the taluk was 372-34 sq. miles in 315 villages. The area was taken over under the Madras Estates Abolition Act, 1948 and was administered by the Government under managerial establishment till 1-7-1957 on which date the settlement rates were introduced in this taluk. The 315 villages were surveyed and grouped into 128 villages for administrative convenience. This is the first taluk in which settlement was effected for the first time under Estates Abolition Act. The Scheme Report has been drafted by Sri B.C. Gangopadhyay, I.A.S. Nagari, Nandi and Kushasthala are the rivers or streams flowing across the taluk, which will be in good freshes only during the rainy seasons. They feed a number of tanks and serve as drainage courses. There are a good number of rain-fed and river-fed tanks besides spring ponds (Kasams) and river spring channels used for irrigation. It enjoys good rail and road communications. Chittoor and Chandragiri taluks are the adjoining ryotwari areas for this taluk, and their affinity to those two taluks is greater than that to Madanapalli and Vayalpad taluks which are also ryotwari areas in this district. For the purposes of settling this taluk, the resettlement notification applied to Chandragiri and Chittoor taluks was followed. The irrigation sources were classified into five classes. The first class being perennial sources, which afford a supply for irrigation throughout the year. Second class sources are those supplying for 8 months and more. Third class sources supply between 5 and 8 months while the fourth class sources supply water between 3 and 5 months. All other sources which supply for less than 3 months, are classified as fifth class sources.

The important provision made for the classification of lands is to recognise 'Manavari' or rainfed lands on which paddy could be grown. The money rates for 'Manavari lands' have been so fixed as the highest manavari rate is the same, as the lowest but one wet rate and the lowest manavari rate is the same as the lowest but one dry rate of resettlement rates of Chandragiri and Chittoor taluks. In contrast with the resettlement notification, referred to within, the lands in the water spread of the tanks held by pattas, have been ordinarily charged at the highest dry rate. The next important feature is about the treatment of the poramboke wells about which nothing was mentioned in the resettlement notification. The wells stand on poramboke amidst patta lands. The ryots contend that their fore-fathers constructed them. All these wells situated on porambokes amidst patta lands have been treated as private wells.

Tiruttani taluk has been placed in the first dry group as in the case of Chittoor and Chandragiri taluks. Garden lands, which were specially assessed during the estate regime, have been classified as dry lands under general principles. As there is no first class source in this area, no lands are registered as double crop lands. The average rainfall of the taluk before settlement has been worked out to be 33.78 inches. Paddy is the predominent wet crop. Turmeric and betelvines are raised on insignificant extents. The broadcast system as well as transplantation system, prevail for paddy. Among the dry crops, ragi and cumbu occupy the pride of position. Next comes cholam.

The financial results of the settlement are shown below :

		Total assessment.
1.	Pre-rent reduction	.. Rs. 5,11,423-0-11
2.	After rent reduction	.. Rs. 2,92,645-1-1
3.	According to settlement	Rs. 3,18,435-1-0

The burden of the rates has been equitably distributed. The money rates have gone down to 25 from 271 of the rent-reduction period and 493 of the Estate regime, from which it may be seen that the settlement has resulted in a more equitable system with greater uniformity and equity.

Kuppam and Puttur Taluks

The settlement rates under the Estates Abolition Act, 1948 were introduced in these taluks also with effect from 1-7-1958, on similar lines adopting the resettlement notification in force of the taluks of Chittoor and Chandragiri for Puttur taluk and that of Palmaner taluk for Kuppam taluk.

CUDDAPAH DISTRICT

Introduction

Cuddapah District is situated between 13°.43′ and 15°.14′ of northern latitude and 77°.51′ and 79°.29′ of eastern longitude. Each of its sides is bordered by a single district, Kurnool on the north, Chittoor on the south, Nellore on the east and Anantapur on the west. The population of the district is 11,61,731 and the area of the district is 5,923 sq. miles. The density of population in the district is 196 per sq. mile. The district comprises the following taluks and revenue divisions.

Name of the division.	Name of the taluk.
1. Cuddapah ..	1. Cuddapah.
	2. Rayachoti.
	3. Kamalapuram.
2. Jammalamadugu ..	1. Jammalamadugu.
	2. Proddatur.
	3. Pulivendala.
3. Rajampet ..	1. Rajampet.
	2. Sidhavattam.
	3. Badvel.

The land utilisation of the area in Cuddapah in the year 1954-55 is as follows :

	Acres.
Total geographical area	37,98,522
Area of Forests	11,56,865
Barren and uncultivable land	1,60,846
Land put to non-agricultural uses	2,03,536
Cultivable waste	6,59,771
Permanent, Pastures and other grazing lands ..	1,42,384
Land under Miscellaneous trees, crops and groves not included in the net area sown	20,881
Current fallows	3,60,334
Other fallow lands	28,505
Net area sown	10,65,400
Area sown more than once	1,03,377
Total cropped area	11,68,777

Weaving is one of chief industries of the district. Fine handloom sarees are manufactured in Madhavaram, Moolapalle and Kuruguntapalle of Siddhout taluk, Pullampeta and Proddatur. The stone quarries are worked in dry season. The quarries in Nidujuvvi in the Kamalapuram taluk are famous for fine Cuddapah slabs which are exported to all parts of the Madras State. In Jammalamadugu taluk there are also some quarries which yield good granite slabs.

2. *Soil.*—The soils in this district have been divided into two main classes 'black' or 'regar' and red. Each of these is again subdivided into 'Clay', 'Loam' and 'Sand'. There are thus six classes of soil spread over the district. Black clay is considered to be the best soil in this district. It occupies 23.7 per cent of the total classified area of the district. Red clay 1.3%, is found scattered in the Rajampet division and in Cuddapah and Proddatur

taluks. Black clay is found mainly in the taluks of Jammalamadugu, Pulivendla and Proddatur, red loam which is not so good, is met with in all the taluks of the district, but is exceptionally plentiful in Badvel, Cuddapah, Rajampet and Rayachoti taluqs. The worst soil is red sand which is met with mainly in Rayachoti taluk. The soils in Cuddapah, Proddatur, Jammalamadugu, and Pulivendla taluks are of moderate fertility. As regards Rajampet division, the lands situated near the Pennar and Sagileru basins are fertile on account of the alluvium deposited there. In Rajampet taluk, red loam of high agricultural value predominates. The sub-soil in B.C. lands of Jammalamadugu and Proddatur taluk consists of loose-rock, (*viz.*), slabs.

3. *Rainfall.*—For this purpose the year may be divided into the following seasons.

Season	Average rainfall (1954-55) inches	Average rainy days
N.W. Monsoon	14.0	16
N.E. Monsoon	14.0	14
Winter period	0.2	1
Hot weather period	6.0	9
	34.2	40

The normal rainfall of the district is 27.1″

AVERAGE ANNUAL RAINFALL OF THE DISTRICT

Rainfall in inches

1949-50	1950-51	1951-52	1952-53	1953-54	1954-55
28.10	19.70	21.00	20.00	29.80	35.20

and

1955-56. The average rainfall is 30.60.

The normal rainfall of the district is 27.1″. The first four months of the year are practically rainless, but in May the advance showers of the south west monsoon begin to fall and after this the falls become heavier, the wettest months being September and October. Heavy showers often occur in August and November but are uncertain than in September and October.

4. *Irrigation.*—The whole of the district is drained by the Pennar river and its tributaries. The river Pennar runs from west to east and enters in Nellore district through the gap in the Eastern ghats at Somasila. Its chief northern tributaries are the Kunderu and the Sagileru and the southern tributaries, the Chitravati, the Papaghni and the Cheyyeru. These tributaries and the main river take their rise outside the district. The K-C canal is the principal irrigation source in the district. It takes off at Sunkesula from the Tungabhadra river in Kurnool district and is 190 miles and 14 chains long. It enters the Cuddapah district at Mile 136.7. The total area of irrigation under the K-C canal in Cuddapah district is 43,280 acres. The commandable ayacut as located in this district is 93,141 acres. An extent of acres 19,540 is irrigated under spring and river channels (in the district) for which the ryots contribute labour constantly for the removal of silt.

Particulars of the sources of water supply and the area irrigated there from in the district in 1954-55 are given below :

Sources of water supply	No.	Area irrigated Acres
1. Government canals	405	68,044
2. Private canals	6	920
3. Tanks (*a*) with ayacuts of 100 acres or more	155	62,377
(*b*) with ayacuts of less than 100 acres	1,029	
	1,184	
4. Wells	34,430	96,624
5. Other sources (Spring channels, etc.) ..		10,597

5. *Cultivation.*—73.7 percent of the area cultivated is devoted to food crops of which cereals occupy 63.1%. Paddy, Cholam, Cumbu and Ragi are the chief food crops raised in the district. The area under paddy is comparatively large in Rajampet and Rayachoti taluks on account of the large number of irrigation sources in these taluks. Cuddapah and Proddatur taluks also contribute a fairly large area on account of irrigation facilities under the

K-C. canal. Paddy is the staple food grain of the richer classes in the taluks of Rayachoti, Rajampet, Cuddapah, Proddatur and Badvel while cholam, cumbu and ragi are the chief food crops of the poorer classes in all the taluks. Cholam is extensively grown in the taluks of Jammalamadugu, Pulivendla, Cuddapah and Proddatur, Cumbu in the taluks of Rayachoti, Rajampet, Badvel and Sidhout and Ragi in the taluks of Rajampet, Cuddapah, Sidhout and Proddatur. Among the commercial crops the foremost is groundnut, the area sown being 18.4 per cent. Groundnut is extensively grown in the taluks of Rayachoti, Pulivendla, Jammalamadugu, Proddatur and Cuddapah. The extent under 'Orchard and garden produce' is the largest in Rajampet taluk where the soil is best suited to it. Mango gardens also exist here in large areas. Betel leaf gardens are extensive in Rajampet taluk and a portion of Cuddapah taluk. They are mostly grown under spring channels. The particulars of total area sown at different periods are as follows :—

	Original settlement 1870	Resettlement 1903	In 1956
Extent in acres	6,70,144	10,65,245	11,49,394
Area cropped more than once.	10	11	73,734
Net area sown	12	13	10,75,660

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The crop calender showing the sowing, harvesting and peak marketing seasons of some of the important crops of the district is given below :—

Products	Sowing	Harvesting	Peak marketing
1. Paddy ..	August, October, January	Jan. February March, April	March, June. May, June.
2. Cholam .	August, September	December, January.	February, June.
3. Ragi ..	June August	October December	January, March.
4. Groundnut.	August, Sept.	Nov. December	Jan. February.
5. Cotton	August–Sept.	February April	May.

6. *Cost of cultivation* (per acre)

The particulars gathered are tabulated here under.

	Paddy Rs.	Jonna Rs.	Korra Rs.	Ragi Rs.
1. Settlement scheme reports	..			
(*a*) Original settlement	19.00 to 5.13	6–2–9 to 1–14–3	6–2–9 to 1–14–3	6–2–9 1–14–3
(*b*) Resettlement	18.00 to 12.00	4–15–9 to 1–14–3	..	..
2. Director of Agriculture				
(*a*) N.E.S. Block Chennur, 1958	225.00	65.86	..	215.09
(*b*) Porumamilla Block 1958	171.77	..	..	..
(*c*) Jammala-madugu Block 1958	..	49.20	..	..
(*d*) Mydukur Block 1958	..	21.62	25.40	..
(*e*) Collector 1958	185.00	85.00	44.00	98.00

7. *Prices.*—The average prices of a few important crops at different periods are as follows :—

(per garce of 3,200 M.Ms.)

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Products	Original settlement Rs.	Resettlement Rs.	1935-36 to 1945-46 average of 10 years Rs.	1946-47 to 1956-57 average of 10 years Rs.
Paddy	140	162	359	1,090
Cholam	163	173	..	1,490
Ragi	..	..	..	..
Korra	114	..	..	..

8. *Yields.*—The gross outturns of several crops gathered from different sources are as follows :—

Source	Paddy	Cholam	PER ACRE IN M.Ms.	
			Sajja	Ragi
1. Settlement Reports:			Dry grains	
Original settlement	1,450 to 320	500-80	80-325	
Resettlement	1,100-400	400-80	80-260	
2. Director of Agriculture	885	198	272	
*3. Bureau of Statistics . & Economics.	628	100	..	
**4. Officials ..	776	337	..	424
**5. Non-officials ..	874	453	..	624

Sources

*From the statistical abstract 1955-1956 on the basis of Random sampling method adopted.

**From the answers to the questionnaire.

9. *Seasonal conditions.*—The greater part of the district lies within the famine zone of the state, the taluks which are not distinctly included in it being Sidhout and Rajampet. The following were the famine years.

1800-1802	
1823-1824	
1833-1834	Serious famine
1866-1867	Slight ,,
1876-1878	Serious ,,
1891-1892	Famine.
1896-1897	,,
1899-1900	,,
1901-1902	Distress.

A STATEMENT SHOWING THE PARTICULARS OF REMISSION GRANTED DURING THE PAST FIVE FASLIS IS GIVEN BELOW:

DETAILS OF REMISSIONS GRANTED IN TERMS OF RS.

Fasli	Waste	Shavi	Tirva kammi	Fasli Kammi	Other remissions	Special remissions.	Total	Remarks
1362	42381	133055	36674	3136	3095	105023	323364	
1363	11994	1260	37928	130	6653	..	57965	
1364	13270	2105	23846	509	7284	..	47014	
1365	19931	2130	21181	253	6711	..	50206	
1366	8878	1115	10607	104	5661	..	26365	

10. *Holdings.*—The number of land holdings in the district is 3,03,136 and the area covered by them is 9,69,737 acres of which the wet ayacut consists of 85,994 acres. The average size of the holding in the district including both wet and dry lands is only 3.75 acres. It may be seen from this that almost all the ryots in the district have just small patches of lands with the exception of very few, if any, big land lords owning extensive holdings. A statement showing the details of pattas bearing different assessments is given below :

DETAILS OF PATTAS BEARING DIFFERENT IN CUDDAPAH DISTRICT.

Holdings assessed to	NUMBER			EXTENT	ASSESSMENT
	Single	Joint	Total	Acres	Rupees.
Re. 1 & less	47,986	54,662	1,02,648	1,29,741	88,719
Rs. 10 and less but over Re. 1	75,971	67,207	1,43,178	3,46,851	4,44,561
Rs. 30 „ Rs. 10	17,445	21,395	38,840	2,60,824	3,94,096
Rs. 50 „ Rs. 30 ..	5,192	4,744	9,936	1,12,499	2,15,518
Rs. 100 „ Rs. 50 ..	1,573	6,387	7,960	79,295	1,33,935
Rs. 250 „ Rs. 100 ..	302	207	509	31,661	52,846
Rs. 500 „ Rs. 250 ..	33	31	64	8,775	17,475
Rs. 1000 " Rs. 500 ..	1	..	1	111	610
Over Rs. 1000 ..	..	..	..	..	..
Total ..	1,48,503	1,54,633	3,03,136	9,69,737	13,47,760

Features of Original Settlement

The original settlements of the taluks of Cuddapah district were done at different periods from 1872 to 1882 as shown below.

Year	*Name of the taluk*
1872	Cuddapah, Jammalamadugu, Proddatur and Pulivendala.
1873	Badvel, Sidhavattam and Rajampet.
1882	Rayachoti.

In these settlements both wet and dry lands with the exception of small area classified as "permanently improved". were classified under the two main series of regar and red-ferruginous.

The villages were divided into groups not only for dry lands but also for wet lands. The principle adopted in grouping the villages in respect of dry lands is the relative fertility of the soil and in the case of wet lands the capacity of irrigation sources. By adopting these principles the villages in different tracts of the district, were divided into groups as shown below :

	Cuddapah, Jammalamadugu, Proddu-turu	Pulivendla	Badvel Sidhout Rajampet	Raya-choti
No. of dry groups ..	3	2	3	3
No. of wet groups ..	2	2	3	2

Cholam and Korra were taken as the staple food crops for dry lands. Paddy, as usual, was taken as the staple food crop for wet lands.

The grain outturns per acre, determined ranged from 320 to 1450 M.Ms. of paddy in wet lands, from 500 to 800 M.Ms. of cholam and from 80 to 325 M.Ms. of cumbu in dry lands. The cultivation expenses per acre ranged from Rs. 12 to 19 for wet crops and from Rs. 1-14-3 to 6-2-9 for dry crops.

A deduction of 20 to 25% of the yields was allowed for vicissitudes of seasons and unprofitable areas.

A further deduction of 15 per cent was allowed for cartage and merchants' profits.

The commutation rates determined on the basis of prices prevailing during the faslis from 1255 to 1274 for paddy, cholam and cumbu were Rs. 126 to 141, 147 to 151 and Rs. 130 per garce of 3200 M.Ms. respectively.

The money rates ranging from Rs. 2 to 10 for wet lands and from Rs. 0-4-0 to 4 for dry lands were fixed.

Features of Resettlement of Cuddapah district

The resettlement of the taluks of Cuddapah district was done at different periods from 1907 to 1912.

No general reclassification of soils was undertaken except those transferred from poramboke and unassessed to assessed since the last settlement.

The grouping of villages in respect of dry lands adopted at the original settlement remained unaltered.

Though the average price level of foodgrains showed small increase, no enhancement of the dry rates fixed at the last settlement was made.

At the original settlement, the irrigation sources were not classified, but the villages were divided into groups according to the general capacity of the irrigation under each source. As this system of grouping of irrigation sources was inelastic all sources of irrigation were classified into five classes according to their condition and capacity. The wet grouping of villages was abolished.

The differential water-rate system is in force in this district.

The lands registered as wet without any source but which were situated in the water spread of tanks were transferred to 'dry' and assessed at special rates not exceeding the highest dry rate of the district.

Lands irrigated by baling from sources other than wells were allowed a remission of one rupee per acre.

Increment Remission

The increase in assessment of individual holding by 25% or more was spread over a series of years under the principles of increment remission. The money rates according to the latest resettlement in Cuddapah district are as follows per acre:

Taram	Wet rates		DRY RATES				Remarks
			Badvel Siddhout, and Rajampet.		Remaining taluks		
	Rs.	a.	Rs.	a.	Rs.	a.	
1	10	0	4	0	4	0	Scheme sanctioned for Jammalamadugu, Cuddapah and Proddatur in G. O. No. 2108, Rev., Dated 21st August, 1907, for Pulivendla in G.O. No. 3227, Rev., dt. 25th November, 1909, Badvel, Siddhout and Rajampet in G. O. No. 2246, Rev.,dated 6th July, 1910. Rates introduced in Jammalamadugu and Proddatur in F. 1317 (1907-08), Cuddapah in F. 1318 (1908-09), Pulivendla in F. 1320 (1910-11) and Badvel and Siddhout in F. 1320 (1910-11) and Rajampet in F. 1321 (1911-12)
2	9	0	3	0	3	0	
3	8	0	2	4	2	4	
4	7	0	2	0	2	0	
5	6	0	1	12	1	12	
6	4	8	1	8	1	8	
7	3	8	1	4	1	4	
8	3	0	1	0	1	0	
9	2	8	0	12	0	12	
10	2	0	0	10	0	8	
11	..		0	8	0	4	
12	..		0	4	..		

13. *Estates taken over.*—As regards the taken over estate villages in this district, survey and settlement operations are in progress.

EAST GODAVARI

Introductory

East Godavari district takes its name from the great river which forms its Western boundary and the delta of which it is the richest and most fertile portion. The adjoining western districts are West Godavari, Khammameth, Warangal and Karimnagar. On the north, the district touches the Madhya Pradesh and Orissa States and the Visakhapatnam district. The headquarters of the district is Kakinada. The district has an area of 5,768 square miles and a population of 2,414,808 (the density of population being 419 per sq. mile). It extends from 16° 19′ to 18° 38′ N. and from 80° 22′ to 82° 36′ E. The land utilisation of the area in 1955-56 is as follows :—

	TOTAL GEOGRAPHICAL AREA	36,37,000
		Acres
1.	Area of forests	13,93,083
2.	Barren and uncultivable land	2,32,034
3.	Land put to non-agricultural use	1,85,526
4.	Cultivable waste	4,03,864
5.	Permanent pastures	1,38,726
6.	Trees, miscellaneous crops and groves	50,275
7.	Current fallows	65,396
8.	Other fallow lands	51,682
9.	Total area sown	13,34,573
10.	Area sown more than once	2,18,164
11.	Net area sown	11,16,583

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The district can be divided into three distinct zones *viz.*, delta, upland and agency. The deltaic portion consists of the taluks of Amalapuram, Kothapeta, Razole and Ramachandrapuram besides portions of Kakinada and Rajahmundry taluks. The upland portion comprises the taluks of Peddapuram, Pitapuram, Tuni and portions of Kakinada, Ramachandrapuram and Rajahmundry taluks. The agency portion comprises the Chodavaram, Yellavaram, Bhadrachalam and Nugur taluqs. The boundary line between the delta and upland areas was taken to be that of the Eluru, Samalkot canals.

There is great disparity in the security of water supply, the fertility of the soil and the facilities for marketing produce, and communications between the delta and the uplands. The contrast between the two areas is marked ; the delta ryot has few anxieties and is assured of a reasonably good crop except when there are extraordinary floods in the river, the upland ryot has to face the vicissitudes of season and to work far harder for an average return for less than that of the delta ryot. Speaking generally, the delta ryot is well off and the upland ryot is poor. A greater part of the agency is hilly, undulating and illsuited for irrigation. Agriculture of the crudest form is the chief occupation of its inhabitants. Although there was sufficient area of fertile lands that could be brought under cultivation the majority of the agency men preferred to cut the jungle on hill sides and practised the peculiar system of hill side cultivation styled "podu, or shifting cultivation". This was due to want of capital to purchase the necessary cattle, implements and seeds and also to their innate laziness and disinclination to produce anything beyond what is required for satisfying their immediate wants. Hill Cholam was their staple food. Failure of seasonal rainfall makes their condition precarious. However, with the advance of time, their culture has also progressed appreciably to the present day. Yellavaram taluk and the southern portion of Chodavaram are more advanced in point of agricultural practices, health, sanitation and general level of culture owing to greater and more intimate contact with the plains on account of easier communications. There are 79½ miles of broadgauge railway and 1,863 miles of roads in the district.

Soils

The deltaic character of the district accounts for the large extent of alluvial soil which is 52.7 per cent in this district. It is found in the deltaic regions and also in the Peddapuram taluq through which the Yeleru river flows. 32.00 per cent of the soil of the district is red ferruginous and occurs mostly in the uplands. Sand-stone predominates in the central portion and south-western border of the district, gneiss on the east of the inland border and alluvial elsewhere. The regar is 8.07 per cent and the arenaceous 6.07 per cent.

Rain Fall

For this purpose, the year may be divided into the following four seasons :—

[*Statement.*

Season	Months	Average rainfall 1894-1923 (*inches*)	Average rainfall 1943-46 (*inches*)	Average rainfall 1955-56 (*inches*)
1. Winter period or dry weather .	January—February	0.72	..	0.4
2. Hot weather period ..	March—May	3.73	..	6.1
3. South-West Monsoon ..	June—September	26.76	..	21.5
4. North-East monsoon ..	October—December	10.53	..	14.4
		41.74	41.76	42.4

	Plains	*Agency*
The average rainfall in 1957	52.3″	53.8″
The average rainy days in 1957	43	52

The normal rainfall is 41.8″

The first four months of the year are practically rainless but in May, there is normally a fair fall. More than half the annual rainfall is brought by the south-west monsoon, most of the rest falling in October or November. The coast is affected by cyclones occasionally during October. Rain is required in May and June to plough dry lands and to raise seed beds in the delta area. In July and August it is required to enable the ryots to sow dry crops and to transplant paddy in the delta area. In September and October, it is needed for standing crops. Then in February and March occasional showers are required to help transplanting second crop paddy. The channels are opened in the last week of May or first week of June and there is rush for water for seed beds. The lands higher up require all the water and it is some time before those at the tail-end can be satisfied. So, unless there is sufficient rain in May and June, some difficulty is experienced. Second crop paddy is not usually raised till the end of January or the beginning of February as crops do not thrive in December and January.

Irrigation

Prior to 1840 the Godavari district was frequently the scene of bad famines. In 1832 a terrible famine ravaged the district and the calamitous famine of 1840-41 followed after some more bad years.

The recurring famines, the decreasing population and the dwindling revenue spurred the Government into action and late Sir Arthur Cotton proposed the construction of an anicut across the Godavari at Dowlaiswaram with three canals one for each of the three deltas known as the Western, Central and Eastern deltas. The works were sanctioned almost immediately and carried out expeditiously under his guidance.

The Godavari anicut system irrigates Razole, Amalapuram, Ramachandrapuram and portions of Kakinada and Rajahmundry taluks, and it is a main source of irrigation. Prior to the construction of the anicut, there was comparatively little irrigation in Central and Eastern deltas. The extent irrigated was about acres 35,576 (17,855 under tanks and 17,721 under channels). The river Godavari raises in the Western Ghats within 50 miles of the Arabian sea and flows across the peninsula for 900 miles before it falls into the Bay of Bengal. The river drains about 1,15,000 square miles and carries as much as 1½ million cubic feet per second, in very high floods. The anicut is in four sections, linking the islands in the broad river, the Dowlaishwaram section 4,839 feet long, the Ralli section 2,859 feet long, the Maddur section 1,550 feet long and the Vijjeswaram section 2,601 feet long. Some time after the construction of the masonry dam it was found necessary to raise the anicut slightly and fit up falling shutters, 2 feet high on the crest. In 1935 the 2 feet shutters, were replaced by 3 feet shutters. The central delta, particularly the Nagaram island is the 'Garden of the Godavari district' and is noted for that Gannavaram aqueduct which was completed in about 8 months by Captain Orr in the fifties of the last century. The Polavaram aqueduct at Annampalli is a similar recent construction to irrigate Polavaram island. Razole taluq is also irrigated by the Peravaram pumping scheme. The Godavari is an unfailing source of water supply. The first crop in the delta has never failed for want of water in the canals. The river receives its freshes in June and in full flood during July and August. The canals are open for practically eleven months in the year and they are closed during May each year. Even though there is plentiful supply in the river for at least ten months in the year, there is scramble for water during the first crop season and the end of the second crop season. This is mainly due to the fact that the cultivation seasons cannot be adjusted to the periods when there is water in the river. In December and January the river has plentiful supply, but no wet paddy crop is on ground. Local rainfall is also necessary to raise a successful crop under the anicut. The low level lands suffer from submersion when there are heavy floods in the river.

There are some spring channels in the Rajahmundry taluk but most of the irrigation is by rainfed tanks. The spring channels in

Peddapuram taluk are used for irrigation. The wet lands in Peddapuram taluk are mostly irrigated by tanks and the river channels taking off from Yeleru river. This Yeleru river rising in Yellavaram agency of the district runs south through its fertile valley in Peddapuram taluk of the Samalkot canal and passes off into the erstwhile zamindari areas of Pitapuram and Tuni. Owing to the silt brought down the stream from the agency, the valley of the river is covered with an alluvial deposit and is noted for its sugarcane crop. The irrigation under the Yeleru is regulated by the turn systems prescribed in the diary of Kanchi Ramanna Pantulu. Wells are used to irrigate areca-nut gardens in Amalapuram and Razole taluks. There are about 1,106 irrigation pumps worked by oil engines (853) and electric power (253) in this district. The sources of water supply and the area irrigated therefrom in the district in 1955-56 are given below :

Sources of water supply	No.	Area irrigated *Acs.*
1. Government canals	11	4,74,102
2. Private canals	..	..
3. Tanks	1,196	1,33,594
(*a*) With ayacut of 100 acres or more	569	
(*b*) With ayacut of less than 100 acres	627	
4. Wells (private, masonry) ..	366	301
5. Other sources (spring channels, etc.) ..		7,819
		6,15,816
Area irrigated more than once (second crop)		94,267
Total area irrigated		7,10,083

Cultivation

Food crops are raised in 83.8 per cent of the area cultivated. Paddy being the chief food crop, Ramachandrapuram, Amalapuram, Kakinada and Razole taluks have the largest extent of paddy cultivation. In the delta tracts water is allowed for second crop only by rotation. Under the localisation scheme water is allowed every year to lands placed in the permanent zone and once in every two or three years to the other lands according as they are classed in the biennial or triennial rotation zone. Amalapuram and Razole taluks comprise the biennial zone while Ramachandrapuram and Kakinada taluqs from the triennial zone. In the delta tracts where second crop paddy is harvested, a catch crop like black-gram, horsegram, etc., is also raised with the aid of the moisture and the dew fall in the season. Cholam is cultivated extensively in Bhadrachalam and Nugur taluks and on limited extents in other parts. Maize, Cumbu, Ragi, Corra, Varugu and Samai are the other cereals raised in the district. Greengram, Redgram, Blackgram, Bengalgram and Horsegram are the pulses cultivated. Sugarcane, Gingelly, Cotton and Mangoes are the important commercial crops of the district. Tobacco is chiefly grown in Rajahmundry taluk. The area under coconuts is appreciable. Fruit cultivation is becoming popular. The particulars of the total area sown at different periods is as follows :

In or about 1860 (Original Settlement)	In or about 1899 (first settlement)	In or about 1923 (second settlement)	In 1956 Present time
2,60,105 (*approximatety*)	5,64,087	6,83,821	13,34,573

Area cropped more than once		Net area sown	
1923	1956	1923	1956
1,60,670	2,18,164	5,23,151	11,16,583

The crop calender showing the sowing, harvesting and peak marketing seasons of some of the important crops of the district is given below :

Products	Sowing	Harvesting	Peak marketing
1. Paddy	June-Aug. Jan.- Feb.	Sept-Oct. April-May.	June-July.
2. Cholam	October	February	March-June
3. Sugarcane	February-March	January-March	April-June.
4. Tobacco	October	February	April-June
5. Gingelly	June-July	Sept.-Oct.	Nov.-Dec.
6. Chillies	September	March	April-June
7. Onions	July-Oct.-January.	Dec.-March-May.	Jan.-June.
8. Redgram	July-Aug.	Jan—Feb.	March-April.

The Costs of Cultivation

The particulars gathered are tabulated hereunder :

Source & Year	White paddy	Black paddy	Cholam	Sajja	Ragi	Horse-gram	Tobbacco	Sugar-cane	others
Settlement scheme reports of original and resettlements 1860-1931	3- 8-0 to 14- 0-0	2-12-0 to 4- 0-0	2- 0-0 to 4-12-0	2- 0-0 to 4- 0-0	2-12-0 to 4- 4-0	2- 4-0 to 2-12-0	35- 0-0 (1860)	95- 0-0 (1860)	
Director of Agriculture Rajupalyam Farm of Kirlampudi N.E.S. block (1958) 1st crop	193-0-0	..	..	..	..	..	..	..	
The Collector(1958)	175-0-0	50-0-0	45-0-0	..	..	..	475-0-0	1136-0-0	(Collector-1958) Coconuts Rs. 197 Plantains „ 445 Groundnut „ 75 Chillies „ 194 Gingelly „ 38 Cotton „ 98

The prices

The average prices of important crops at different periods are as follows :—

Products			1860 original settlement	1899 First re-settlement	1931 Second re-settlement	1946-47 (10 years' average)	1956-57 (10 years' average)
			Rs.	Rs.	Rs.	Rs.	Rs.
Paddy	..	..	88	136	293	324	894
Cholam	..	..	101	169	345	..	..

The yields

The average gross outturns of several crops gathered from important sources are :

Source	Paddy	Cholam	Sajja	Ragi.
1. Settlement reports	500 to 1150 M.Ms.	50 to 800 M.Ms.	66 to 666 M.Ms.	100 to 933 M.Ms
2. Director of Agriculture : Rajupalem farm of Kirlampudi Block 1958 .	2000 M.Ms.	..	..	..
3. Bureau of Statistics (1956)..	788 M.Ms	442 Lb.	541 Lb.	731 Lb.
4. Collector.				
1954-55 ..	812 M.Ms.	713 Lb.	..	..
1955-56 ..	630 M.Ms.	811 Lb.	673 Lb.	..
1956-57 ..	858 M.Ms.	508 Lb.	250 Lb.	328 Lb.
5. Non-Officials 1958	954 M.Ms.	251 M.Ms.	198 M.Ms.	..

In 1947 Sri N. Raghavendra Rao estimated the price of straw yielded from one acre at Rs. 40. In 1958 the State Marketing Officer furnishes Rs. 40 as the normal price of straw from one acre of paddy crop in the State.

Seasonal Conditions

The years of seasonal calamities are the following :—

Floods	1614
Inundations by sea	1706
do. ..	1787
Famine	1791
Distress due to failure of monsoons ..	1835–38
The Guntur Famine	1832–33
Disastrous cyclone, inundation and famine	1839–41
Floods	1862, 1863, 1875, 1878, 1882 to 1884.
Great flood	1886
Floods	1887

Floods	1892
Floods	1895-96
Scarcity in agency due to failure of monsoon	1897
Floods	1900
Scarcity	1918-1921
Floods	1928
Storm	1937
Cyclone	1945
Cyclone	1949
Floods	1953

A statement showing the particulars of remissions granted during the past five faslis is given below :

Fasli	Rs.
1362	1,38,092
1363	2,55,794
1364	20,251
1365	14,259
1366	21,954

Holdings

The number of land holdings in the district is 1,37,037 and the area owned by them is 5,11,268. acs. Thus it is evident that this is a district of small holdings. At the same time it is one of the few districts where we have an appreciable number of pattadars with large extents. The latest particulars are given below:

DETAILS OF PATTAS BEARING DIFFERENT ASSESSMENTS

Classification of holdings	SINGLE PATTAS			
	Number of pattas	Extent of holdings		Assess-ment
		Dry	Wet	Rs.
(1)	(2)	(3)	(4)	(5)
Re. 1 and less	11,783	5,641	784	8,976
Rs. 10 and less but over Re. 1	37,017	46,135	14,280	1,69,719
Rs. 30 and less but over Rs. 10	19,748	39,103	30,705	3,14,292
Rs. 50 and less but over Rs. 30	6,014	19,095	16,755	2,07,754
Rs. 100 and less but over Rs. 50	3,838	22,006	19,298	2,39,638
Rs. 250 and less but over Rs. 100	1,595	16,879	18,235	2,14,506
Rs. 500 and less but over Rs. 250	281	6,272	6,719	88,397
Rs. 1,000 and less but over Rs. 500	55	1,442	3,379	35,191
Over Rs. 1,000	8	369	901	8,847
Total	80,339	1,54,942	1,11,056	12,87,320

DETAILS OF PATTAS BEARING DIFFERENT ASSESSMENTS—(*Contd.*)

JOINT PATTAS				
Number of Pattas	Number of Share holders	Extent of holdings		Assessment
		Dry	Wet	Rs.
(6)	(7)	(8)	(9)	(10)
5,461	9,470	2,174	255	4,919
24,380	49,425	37,938	9,837	1,27,678
16,011	39,594	37,364	23,175	2,73,300
5,423	13,949	21,151	15,912	1,53,423
3,416	9,794	17,523	18,449	2,16,362
1,551	5,354	15,691	18,717	2,06,862
326	1,252	6,519	8,587	1,07,007
69	369	4,292	4,963	44,462
11	102	1,658	1,065	15,347
56,698	1,29,309	1,44,310	1,00,970	11,49,360

NOTE : This does not include water rate, lease amounts, cesses and other miscellaneous revenue.

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Features of the Original Settlement, 1865

(BY MR. R. E. MASTER)

The district was divided into two portions, delta and upland, the former comprising the zone falling within the Godavari anicut system and the latter the remaining portions of the district. Separate rates of assessment were sanctioned for the delta and the uplands. (*a*) All the lands in the delta were classified as dry and uniform water rate was levied on those irrigated in addition to the land assessment. In the uplands consolidated wet rates were imposed on lands irrigated from Government sources. (*b*) The soils in the delta were divided into five classes—alluvial, exceptional or permanently improved, regar, red ferruginous and arenaceous, while those in the uplands were divided into four classes—alluvial, permanently improved, regar, and red ferruginous. The regar and the red ferruginous soils were sub-divided into clay, loam and sand and the arenaceous into loam, sand and heavy sand. Each of these subdivisions were further subdivided into a number of sorts, generally three. Lands classed as alluvial or as permanently improved were also similarly divided into sorts. (*c*) For the purpose of dry assessment, the villages in the delta, as well as the upland, were divided into four groups. The grouping was based on the relative fertility of the soils in each village and not on consideration of proximity of markets or facilities of communications. (*d*) For the purpose of wet assessment the villages in the upland tract were divided into three classes. It is not however clear on what principles the classification was made but the relative fertility of the wet lands appears to have been the main factor that was taken into consideration. In most cases whole villages were placed in the same class and this class generally corresponds with the dry group. In some cases however different classes were assigned to the wet lands in the same village on a consideration of the supply in the irrigation sources. (*e*) Black paddy, cholam, cumbu and ragi were adopted as the standard crops for dry lands in the delta. In addition to those grains, horse-gram was taken as a standard in the uplands. The standard crop for wet lands in the uplands was white paddy. Sugarcane was also adopted as a standard for the exceptional lands under the Yeleru in the Peddapuram taluk. (*f*) For vicissitudes of season and unprofitable areas included in holdings a deduction of 16-2/3 per cent was made from the gross produce in the case of the delta and a portion of Rajahmundry taluk. The deduction allowed for the rest of the upland was 25%. (*g*) The rates of assessment for ordinary wet lands in the uplands ranged from Rs. 1-4-0 to Rs. 7-0-0 per acre. Special rates of Rs. 6 and Rs. 10 per acre were fixed for the exceptional lands under the Yeleru. The rates for oridnary dry lands ranged from As. 4 to Rs. 5 per acre in the delta and from As. 4 to Rs. 4-8-0 per acre in the uplands. Special rates up to a maximum of Rs. 20 per acre were imposed on lanka lands.

The Water Rate

Water rate for Godavari delta was fixed at Rs. 3 an acre in 1861. It was raised to Rs. 4 in 1865 in G.O. 1006, dated 12-5-1865. This was again raised to Rs. 5 per acre in G.O. No. 562, Revenue, dated 2-8-1894. Since 1931, with the resettlement the rate has been increased to Rs. 6-4-0 per acre.

(A) Features of the First Resettlement, 1899

(BY MR. G. P. CLERK)

The division of the district into the delta and the uplands was retained at the resettlement but the two portions were dealt with on different lines as indicated below :—

(*a*) *Delta.*—Consolidated wet rates were imposed on irrigated lands in the delta as it was considered that the levy of a uniform water rate in addition to dry assessment pressed too heavily on the poorer soils while the richer soils escaped their fair share of taxation. Only lands which had been under wet cultivation for five consecutive years or from which Government water could not be excluded, were classified as wet. Other irrigable lands were retained as dry but it was decided that if they were cultivated with wet crops with the aid of irrigation from Government water, the water rate to be levied should be the difference between the appropriate wet and dry rates plus one rupee per acre in consideration of the option allowed of taking water or refusing water and of the administrative inconvenience caused thereby. In order to facilitate the introduction of this system the whole of the deltaic tract was reclassified.

(1) The soils were divided into three main series—alluvial, regar and arenaceous. The alluvial series was subdivided into clay and loam, the regar into clay, loam and sand and the arenaceous into loam, sand and heavy sand. Each class of the alluvial and the regar series was further subdivided into five sorts, while the classes of the arenaceous series were subdivided into three sorts each. Provision was made for an extra sort under alluvial clay and under alluvial loam, and the exceptionally fertile lands in the taluks of Amalapur, Ramachandrapur were classified under this sort.

(2) Irrigation sources were divided into four classes with reference to the conditions of irrigation and drainage.

(3) For the purpose of dry assessment the deltaic tract was divided into two groups.

(4) The standard grains adopted were white paddy for wet and black paddy for dry lands.

(5) After allowing a deduction of 15% on account of merchants' profits and charges of transport commutation rates of Rs. 118 and Rs. 96 per garce were adopted for white and black paddy respectively.

(6) An allowance of 10% for wet and 20% for dry lands was made on account of vicissitudes of season and unprofitable areas included in holdings.

(7) Cultivation expenses were fixed at Rs. 14 to Rs. 5 per acre for wet and Rs. 8 to Rs. 2-6-0 per acre for dry lands.

(8) Padugai and lanka lands held on patta were assessed one and two tarams higher than ordinary dry lands of the same class and sort.

(9) The rates of assessment per acre ranged from Rs. 2-8-0 to Rs. 12 for wet lands, from As. 4 to Rs. 7 per ordinary dry lands, from Rs. 2 to Rs. 9 for padugai lands and from Rs. 2-8-0 to Rs. 11 for lanka lands.

(*b*) *Uplands.*—There was no reclassification of soils or of irrigation sources in this tract. The old rates of assessment were enhanced by about 33-1/3 per cent. The revised rates ranged from As. 5 to Rs. 5-8-0 per acre for dry and from Rs. 1-10-0 to Rs. 9 per acre for ordinary wet lands. The special rates of Rs. 10 and Rs. 6 for dry lands under Yeleru were raised to Rs. 12 and Rs. 7-12-0 respectively per acre. Some rented villages in the tract which had been excluded from the original settlement were now classified and settled. The classification was made on a system of five sorts under each soil and the grouping of villages and the classification of irrigation sources were made with reference to the facilities of communications and irrigation respectively, but the scale of rates applied was the same as that sanctioned for the other upland villages.

(*c*) *Water Rate.*—This remained at Rs. 5 per acre.

(B) Features of Second Resettlement, 1931

(By Mr. B. G. Holdsworth, i.c.s.)

Now also the old division of the district into delta and upland remained generally unaltered. No general reclassification of soils was made and the system of classification of irrigation sources and the dry grouping prevalent in the delta and upland tracts during the first resettlement was retained. The arrangement by which soils of equal productive capacity were grouped in 'tarams' and the notation of the different soils was also retained. But the Special Settlement Officer was authorised to assign a fresh classification or to alter, where necessary, the then existing classification in the case of the following lands:—

(*i*) Lands transferred from dry to wet or vice versa. one irrigation source to another, poramboke and unassessed lands transferred to assessed waste or assigned on patta, and lands disafforested subsequent to the first resettlement.

(*ii*) Lands north of Ellore and Samalkot canals which though regularly irrigated from the delta classified as upland dry, were reclassified on the system adopted for similar soils in the delta.

(*iii*) Large blocks of cultivable waste lands in the uplands and in the tail-end villages of the delta tract which were not previously classified but were likely to be taken on patta.

(*iv*) Lands classified as permanently improved in the upland tract.

(*v*) Lands under irrigation sources recognised subsequent to the first resettlement or the classification of which was altered at the ensuing settlement. (*b*) The Settlement Officer was also authorised to revise and give appropriate classification to irrigation sources in cases the classification made at the first resettlement was manifestly incorrect. (*c*) Wet ayacuts were revised as detailed below :—(*i*) The lands selected for inclusion in Godavari western delta where owners paid inclusion fees and corrected the level of lands, were transferred to wet. (*ii*) The dry lands which the Settlement Officer in consultation with the P.W.D. considered desirable, were transferred to wet. (*iii*) All Bapat-wet lands and irrigated dry lands cultivated with wet crops in each of the past five faslis and other lands which cannot be excluded from Government water were also transferred to wet in consultation with P.W.D. (*iv*) The dry lands which have been regularly under wet cultivation for 5 years were transferred to wet at the discretion of the Settlement Officer. (*v*) Transfers from wet to dry were also made in the deserving cases. (*d*) The inducement fee of one rupee per acre levied in addition to the appropriate wet assessment on irrigated dry lands was abolished as these lands were transferred to wet. (*e*) No wet lands except those assessed at 'Yeleru Special Rates' were registered as 'double crop' (*f*) Manavari classification was not recognised and the lands on which objectionable achukattu cultivation was carried on were made liable to pay enhanced assessment. (*g*) The following rules in regard to grant of baling remission were continued in respect of first crop. Registered wet lands—Delta and uplands—Re. 1 per acre.

Dry Inam and Zamindari lands in delta ..	¼ the water rate Rs. 1-4-0 per acre.
Dry lands paying ordinary water rate ..	¼ the water rate Re. 1-0-0. Re. 0-12-0 per acre.

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But in respect of the second crop it was modified and fixed at ¼ the second crop charge subject to a maximum of Re. 0-8-0 per acre. (*h*) The commutation rate of white paddy worked out to Rs. 258 a garce for delta tract and Rs. 252 for upland after making a deduction of 15% on account of cartage and merchants' profits. The percentage increase was 119% and 114% for delta and upland respectively. The delta and upland rates were enhanced by 18 ¾% with exception of the special rate of Rs. 12 for lands under Yeleru river in the uplands which was raised by 12½% only.

A comparative table of money rates of the first and second resettlements is as follows :—

DELTA

Wet lands						Ordinary Dry lands					
First Resettlement			Second Resettlement			First Resettlement			Second Resettlement		
1			2			3			4		
Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
12	0	0	14	4	0	7	0	0	8	0	0
10	0	0	11	14	0	5	0	0	5	15	0
9	0	0	10	10	0	4	0	0	4	12	0
8	0	0	9	8	0	3	0	0	3	8	0
7	0	0	8	4	0	2	8	0	3	0	0
6	0	0	7	2	0	2	0	0	2	6	0
5	0	0	5	15	0	1	8	0	1	11	0
4	8	0	5	4	0	1	4	0	1	6	0
4	0	0	4	12	0	1	0	0	1	2	0
3	8	0	4	2	0	0	12	0	0	14	0
3	0	0	3	8	0	0	8	0	0	9	0
2	8	0	3	0	0	0	4	0	0	5	0

Lanka Lands						Pudugai lands					
First Resettlement			Second Resettlement			First Resettlement			Second Resettlement		
5			6			7			8		
Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
11	0	0	13	0	0	9	0	0	10	10	0
9	0	0	10	10	0	7	0	0	8	4	0
7	0	0	8	4	0	5	0	0	5	15	0
5	0	0	5	15	0	4	0	0	4	12	0
4	0	0	4	12	0	3	0	0	3	8	0
3	0	0	3	8	0	2	8	0	3	0	0
2	8	0	3	0	0	2	0	0	2	6	0
..			..			..			..		
..			..			..			..		
..			..			..			..		
..			..			..			..		
..			..			..			..		

UPLANDS

Wet lands		Dry lands	
First Resettlement	Second Resettlement	First Resettlement	Second Resettlement
(1)	(2)	(3)	(4)
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
12 0 0	13 8 0	5 8 0	Reclassified
9 0 0	Reclassified	4 8 0	5 1 0
8 8 0	10 1 0	3 12 0	4 3 0
7 12 0	9 3 0	3 4 0	3 10 0
7 0 0	8 4 0	2 12 0	3 1 0
6 8 0	7 11 0	2 8 0	2 13 0
5 12 0	6 13 0	2 4 0	2 8 0
5 4 0	6 4 0	1 12 0	2 0 0
4 8 0	5 4 0	1 10 0	1 14 0
3 12 0	4 7 0	1 4 0	1 6 0
3 4 0	3 14 0	1 0 0	1 2 0
2 8 0	3 0 0	..	1 6 0
2 4 0	2 11 0	0 10 0	0 12 0
2 0 0	2 6 0	0 8 0	0 9 0
1 10 0	1 15 0	0 5 0	0 5 0

(*i*) Objectionable cases of cultivated lands in the water spread of irrigation source were ordered to be acquired and registered as poramboke in all possible cases. Pattas were issued for other cases of lands which were classed as dry and assessed at special rates. (*j*) The increase of assessment on an individual holding if increased by 25% or more due to resettlement was spread over a series of years and the increase effected gradually subject to certain conditions. (*k*) Water rates were revised and refixed as follows :

Delta	*Upland*
Rs.	Rs.
6-4-0	5-0-0
5-0-0	4-0-0
4-0-0	3-0-0

(2) In G.O. No. 1692, Revenue, dated 27-8-1934 the following rates of assessment were sanctioned for Nugur taluq in the agency:

Wet land (1)			Cholam Land (2)			Paddy land. (3)		
Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
3	8	0	1	4	0	1	12	0
3	2	0	1	0	0	1	8	0
2	12	0	0	12	0	1	4	0
2	6	0	0	8	0	1	0	0
2	0	0	0	6	0	0	12	0
1	10	0	0	4	0	0	8	0

(3) For Yellavaram taluq of the agency, the rates shown below were sanctioned in G.O. No. 2545, Revenue, dated 8-12-1934.

Wet rates			Dry rates		
Rs.	a.	p.	Rs.	a.	p.
8	4	0	2	13	0
7	11	0	2	8	0
6	13	0	2	0	0
6	4	0	1	14	0
5	4	0	1	6	0
4	7	0	1	2	0
3	14	0	0	12	0
3	0	0	0	9	0
2	11	0	0	5	0
2	6	0		..	
1	15	0		..	

(4) In Rampachodavaram and a portion of Yellavaram taluqs of the agency Muttadari system is in force. The Muttadar collects tax from the Mutta ryots on the basis of their dwelling houses, irrespective of the extents of land cultivated by them and pays the demand fixed to the Government. This is in the areas not surveyed and settled. (5) In Bhadrachalam, one of the agency taluqs, the rate of assessment was uniformly levied—the dry rate being Re. 0-5-0 per acre and wet rate being Re. 0-10-0 per acre. The lands involved have not been surveyed or settled.

The Estates Abolished.

The zamindari areas taken over by the Government are being surveyed, settled and converted into ryotwari on the same principles enunciated in the latest resettlement notification in force. The settlement rates are due to be introduced on 1-7-1959 in all the areas of the district.

GUNTUR DISTRICT

Introductory

Guntur district lies between 15°-18′ and 16°-50′ of the northern latitude and 79°-10′ and 80°-55′ of the eastern longitude. The district was constituted on 1-10-1904 from the old Nellore and Krishna districts. It is bounded on the north by Nalgonda and Krishna districts, on the east by Krishna district and Bay of Bengal, on the south by Nellore district and on the west by Nellore, Kurnool and Nalgonda districts. The shape of the district is roughly that of an umbrella spread out. The area of the district is 5,771 sq. miles consisting of 9 taluks and 927 inhabited villages and 25 towns. It has a population of 25.50 lakhs, out of which 20.48 lakhs is rural and 5.02 lakhs urban, the density of the population being 440 per sq. mile. There are 7 Municipalities, 51 class I and 888 class II Panchayats in the district. The headquarters of the district is the Guntur city (formerly known as Moortezanagar) with a population of 1,25,255. The land utilisation of the area in 1955-56 is as follows :—

		IN ACRES
	Total Geographical area	36,93,743
1.	Area of forests	4,68,862
2.	Barren and uncultivable land	3,75,095
3.	Land put to non-agricultural uses	43,020
4.	Cultivable waste	1,10,029
5.	Permanent pastures	94,737
6.	Miscellaneous, trees, crops and groves ..	75,099
7.	Current fallows	3,09,148
8.	Other fallow lands	57,041
9.	Net area sown	21,60,712
10.	Area sown more than once	3,16,944

(2) The district may be divided into 2 regions *i.e.*, (*i*) The delta, (*ii*) the uplands. The taluks of Tenali, Repalle, a major portion of Bapatla taluk, a considerable area in Guntur taluk and a small portion of Ongole taluk form the deltaic portion of the district, while the taluks of Narsaraopet, Vinukonda, Palnad, Ongole, Sattenapalle and parts of Bapatla and Guntur are upland areas.

3. There are in the district 1,807 miles of roads consisting of 99 miles of National Highways, 108 miles of State Highways and 1,600 miles of District and Village roads. The recently completed

Regulator-cum-Bridge over the Krishna river is a landmark in the history of communications, connecting Guntur and Krishna districts on the Madras-Calcutta Trunk Road. There are 133 miles of broadgauge and 162 miles of metre-gauge of Southern Railway in the district. The Krishna, is the biggest river flowing on the border of the district and Gundlakamma, Naguleru, Chandravanka and Musi are the important minor rivers of the district. The climate is generally hot in summer, except in deltaic taluks. Rentachintala of Palnad taluk has the unenviable reputation of recording in summer the highest temperature in Andhra Pradesh. The world famous variety, of Ongole breed of bulls is from this district. Countries like Brazil and Canada purchase these bulls from the Ongole tract. The predominent occupation of the district is agriculture and about 69% of the population depend upon agriculture. Chirala is noted for its handloom cloth and Vetapalem for its export of cashewnut. Betel-vine is also grown in this district.

4. *Soils.*—Over 85% of the area of the district is fertile consisting mostly of black cotton soil. Red-ferruginous soils are found principally in the neighbourhood of Guntur-Guntakal Railway line and arenaceous or sandy soils near the Sea coast. A small extent along the banks of Krishna river is alluvial.

5. *Rainfall.*—For the purpose of rainfall the year may be divided into the following four seasons :

Season	Months	AVERAGE RAINFALL (IN INCHES)			
		1870-1930	1931-1949	Rainfall in	
				1950-55	1955-56
Winter period	.. Jan.-Feb.	0.61	..	..	0.1
Hot weather period	March-May	2.52	..	..	2.7
South-West monsoon	.. June-Spt.	17.89	..	..	16.9
North-East monsoon	.. Oct.-Dec.	9.63	..	..	14.0
		30.65	34.2	28.82	33.7

The normal rainfall of the district is 32.4 inches.

6. *Irrigation.*—The Krishna anicut system irrigates Tenali and Repalle taluks, major portions of Bapatla and Guntur taluks and one village of Ongole taluk. The canal taking off from the

Krishna anicut at Vijayawada (Sithanagaram) and its branches form the main source of irrigation for the delta areas. The irrigation is carried out by four large branches of the main canal from the river Krishna and those are (1) The Main canal, (2) The Commamur canal, (3) The Nizampatnam canal and (4) The Bank canal. There are five major drains in this district frequently causing loss to paddy crop when they overflow.

7. The area irrigated by the Government canals is 4,49,335 acres (1955-56). Irrigation in non-deltaic areas or upland taluks is under rainfed tanks and a few tanks fed by minor streams and rivers. Irrigation is also carried on solely by wells or wells supplementing the other irrigation sources. There are also 2,229 spring channels in Bapatla and Ongole taluks and excavated in the sand ridge which runs parallel to the coast. These springs are called "Sonalu" and the supply in these channels is generally copious. The sand ridge runs parallel to the sea, a few miles from it, from Bapatla to Chinaganjam. There is a valley through which Kunderu drain flows. The extent irrigated under tanks is 45,166 acres and under wells and springs is 10,600 acres (1956). The total net area irrigated both in deltaic and non-deltaic area is 5,13,955 acres (1955-56). The Prakasam barrage brings in an additional ayacut of 54,000 acres of Krishna delta under irrigation in Guntur district. The Nagarjunasagar Project will bring 32 lakhs of acres under irrigation, out of which a major portion lies in Guntur district.

8. The sources of water supply and the area irrigated therefrom in the district during 1955-56 are given below :—

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Sources of water supply	Number	Area irrigated (*acres*)
(1)	(2)	(3)
1. Government canals	14	4,49,335
2. Tanks :		
(*i*) With ayacuts of 100 acres or more..	106	45,166
(*ii*) With ayacuts of less than 100 acres	179	
3. Wells :		
(*i*) Masonary (Government) ..	59	10,600
(*ii*) Masonary (Private).. ..	2,954	
4. Other sources :		
Spring channels, etc... ..		8,854
		5,13,955
Area irrigated more than once (second crop)		13,594
Gross total area irrigated		5,27,549

9. *Cultivation.*—Paddy is the chief crop. Cholam and Cumbu are extensively grown, while Ragi, Korra and Maize are grown on limited extents. Chillies, Groundnut and Tobacco are the chief commercial crops. Turmeric is a very important commercial crop in Tenali taluk. Casuarina plantations and Cashew-nut trees are extensively grown along the coast, in Ongole, Bapatla and Repalle taluks. Virginia Tobacco, Turmeric, Cashewnut and chillies of the district find markets in foreign countries like England, China, America and Russia.

10. The particulars of total area sown at different periods is as follows :—

	In or about 1874 Original settlement	In or about 1905 Resettlement (approximate).	In 1956
	Acres	Acres	Acres
Guntur portion ..	14,12,469	15,51,393	24,77,656
Ongole portion ..	1,82,487	2,02,658	
	15,94,956	17,54,051	
Area cropped more than once (1956)		..	3,16,944
Net area sown (1956)	..	..	21,60,712

11. The crop calendar showing the sowing, harvesting and peak marketing seasons of some of the important crops of the district is given below :—

Name of the crop	Sowing season	Harvesting season	Peak-marketing
Paddy ..	June-Sept.	Dec.-February	March-June
	Jan.-February	April-May	June
Jawar ..	July	December	February
	August	January	June
Maize ..	July	Oct.-Nov.	January
	August	Jan.-March	April-May
Korra ..	July-Sept.	Octo.-Dec.	January
Chillies ..	September	March	April-June
Groundnut ..	July-August	Oct.-Nov.	Dec.-January
Turmeric ..	June-July	Feb.-Nov.	April-June
Bajra ..	July-August	Oct.-Nov.	Jan.-March
Ragi ..	Sept.-Oct.	January	..
	December	March-April	Feb.-March
Tobacco ..	October	February	April-June

12. *Cost of cultivation.*—The cultivation expenses allowed for important food crops at different periods is given below :

Source and year	White paddy Rs.	Black paddy Rs.	Cholam Rs.	Cumbu Rs.	Variga Rs.
Original settlement 1873-74 Guntur portion ..	11 15 2* to 12 10 0	..	4 10 8** to 5 8 8	..	..
Ongole	9 3 2 to 10 8 0	..	1 8 0 to 2 15 0	1 4 0 to 2 5 0	2 0 0 to 5 6 0
Resettlement papers (1905)					
Delta	5 0 0* to 14 0 0	3 0 0** to 8 8 0			
Uplands	11 15 1* to 12 12 5	4 10 9** to 5 6 2	..	..	..
Vinukonda	10 8 0 to 20 0 0	..	..	4 4 0 to 7 0 0	..
Ongole	9 3 2 to .. 10 8 3	..	1 7 11 to 2 14 7	1 3 8 to 2 4 10	2 4 11 to 9 10 3
Collector-1958					
Delta	150	..	..	..	..
Upland	100	..	65	65	..
Vinukonda	245	..	107	107	..

*Wet grains.

**Dry grains.

Prices

The average prices of a few important crops at different periods are as follows:—

	PER GARCE OF 3,200 M.Ms.			
	Original settlement 1873-74	Resettlement 1905	1947-48 10 years' average	1957-58 10 years' average
	Rs.	Rs.	Rs.	Rs.
White paddy :				
Delta	..	122	456	1,074
Upland	100	146		
Vinukonda	..	140		
Ongole	107	143		
Cholam :				
Delta	..	199	742	1,165
Upland	112	184		
Vinukonda	..	..		
Ongole	129	161		
Cumbu :				
Vinukonda	..	173	799	1,248
Ongole	107	167		
Variga :				
Ongole	107	167	..	..
Vinukonda	86	..	..	..

14. *Yields.*—The gross outturn of several crops is furnished below:

Source	White Paddy M.Ms.	Cholam M.Ms.	Cumbu M.Ms.	Variga M.Ms.	Black paddy M.Ms.
Original settlement :					
Krishna-Guntur portion	800-1200	240-560	..	..	..
Ongole	..	70-380	60-375	100-575	..
Resettlement papers :					
Delta	350-1150	90-450	..	..	100-500
Vinukonda	550-1100	..	120-300	..	..
Ongole	500-800	70-325	60-325	140-500	..
Uplands	800-1200	220-560	..	220-560	..
Bureau of Statistics (1956)	892	245	114	..	..
Collector (1958)	1,024	320	192	..	..
Officials	1,000	327	..	400	..
Non-officials	1,094	237	..	359	..

15. *Seasonal Conditions.*—Between November, 1790 and November 1792, there was a serious dearth of foodgrains in this district and numerous deaths occurred due to starvation. In the year 1823-24, the district again suffered severely and public employment was provided for the relief of the distressed. In 1832-34 the famine known as the "Guntur Famine" occurred. It lasted for 20 months and was extremely severe. This was due to insufficient rainfall during the south-west monsoon and almost a total failure of the north-east monsoon. Although the famine disappeared in 1834, its effect continued for some decades afterwards. Even though there was a considerable flow in the river Krishna all through the famine period, it could not be utilised as the present anicut was built only in 1855. Since the construction of the Krishna anicut, the district has been practically immune from famine. The famine of 1876-78 was not severe. The people suffered more from high prices than from actual scarcity. Some distress was felt in faslis 1301, 1307 and 1309. Fasli 1309 was a very bad year and the district especially the uplands, had a narrow escape from scarcity. The decade ending fasli 1340 recorded no actual famine, but in fasli 1336, distress was felt in a few villages of Ongole taluk. There were no famines during the decenniums ending faslis 1350 and 1360. Some distress was, however, felt during the faslis 1361 to 1366 in the upland taluks due to the failure of monsoon.

16. *Holdings.*—The number of land holdings in the district is 5,04,288 and the area owned is 23,78,036 acres. Details of holdings classified according to the assessment payable are given in the following statement.

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Holdings assessed				Total
				Rs.
Re. 1 and less		..	..	63,080
Rs. 10 and less but over		Rs. 1	..	2,80,950
Rs. 30	,, ,,	,, 10	..	1,13,135
Rs. 50	,, ,,	,, 30	..	30,351
Rs. 100	,, ,,	,, 50	..	13,162
Rs. 250	,, ,,	,, 100	..	3,054
Rs. 500	,, ,,	,, 250	..	392
Rs. 1,000	,, ,,	,, 500	..	109
Over Rs. 1,000		..	..	55
		Grand total	..	5,04,288

17. *Features of original settlement.*—The original settlement of the Guntur or western portion of the Krishna district comprising the taluks of Tenali, Bapatla, Guntur, Narasaraopet, Vinukonda, Sattenapalli and Palnad was carried out in 1873-74 under the scheme drawn up by Mr. Wilson. Repalle taluk was then included in the Tenali taluk and the Tenali taluk was split up into two taluks, Tenali and Repalle on the 1st July 1910 under Sir W. Mayer's scheme. Ongole taluk was in the Nellore district and it was settled under the scheme drawn up by Mr. Rundall. From 1-10-1904, Ongole taluk was transferred to the Guntur district.

Taluks other than Ongole.—The Repalle and Bapatla taluks formed the deltaic area while the other taluks formed the non-deltaic tract. The lands irrigated from the Krishna western delta system in the two deltaic taluks were all registered as dry and water cess charged. Only the lands under the pre-anicut tanks and 'Sonas' *i.e.*, springs in the sand ridges were registered as wet. All lands under regular and continuous irrigation in the non-deltaic tract were also registered as wet. The soils in the tract were placed in the alluvial class. (1) Permanently improved (lands having such exceptional features as proximity to village-site, advantages of situation, etc., and the existence of a private well). (2) Regar (*iii*, *iv* and *v*) red ferruginous (*vi*, *vii* and *viii*) and arenaceous (*xii*, *xiii* and *xiv*) series. There were only two sorts under soils classified as permanently improved, red ferruginous and arenaceous and three sorts under the rest. A special extra sort was fixed under regar clay (*iii*) for the specially good soils in the II-group villages. Ninety per cent of the soils in the tract were placed in the regar series, 5% in the arenaceous, 2% in red, 2% in alluvial and 1% in the permanently improved series. The villages were grouped with reference to the fertility of the soils. The loamy tract in the delta, and the alluvial villages which were placed in the first group, the bulk of the villages forming the regar tract were placed in the second and the rest consisting of the sandy coastal villages as well as the poorest of the villages in the uplands were placed in the III group. The irrigation sources were not classified but the villages were assigned a wet group for purposes of the levy of wet assessment. White paddy was taken as the standard crop for wet lands, while for the dry lands cholam and variga, in equal proportions, were adopted as the standard crops. The commutation rates were fixed with reference to the prices, that prevailed during a period of 58 years prior to the Settlement. The rates thus fixed were Rs. 100 per garce for paddy and Rs. 99 for the dry grains. (Rs. 112 for cholam and Rs. 86 for variga). A deduction of 15% was allowed for cartage and merchants' profits. The allowance for vicissitudes of season and unprofitable areas, was 1/6th for the villages placed in the first group and 1/4th in the case of the villages placed in the second and third groups. For wet lands, the allowance for vicissitudes of season was made as for the lands in the villages in the last two groups. Cultivation expenses ranging from Rs. 5-8-8 to Rs. 4-10-8, were allowed in the case of dry lands and from Rs. 12-10-0 to Rs. 11-15-2 in the case of wet lands. The resulting rates of assessment ranged from Rs. 7-8-0 to Rs. 1-12-0 in the case of wet and from Rs. 4-8-0 to annas 0-4-0 in the case of dry lands.

18. *Ongole Taluk.*—The soils were placed in the permanently improved, regar, red ferruginous and arenaceous series. Two sorts were alone recognised under the permanently improved and arenaceous series, while three sorts were recognised under this series and an extra sort 2-E was also fixed in order to assess adequately the lands which are decidedly superior to those under III-2 but not so good as to deserve III-1. The villages were divided into three groups, for purposes of dry assessment with reference to the general level of fertility and the natural advantages enjoyed by them. The irrigation sources were graded according to their capacity and were placed in the II, III and IV classes. White paddy was taken as the standard crop for wet lands and early Cholam, Variga, Cumbu for dry lands. A deduction of 10% was made for merchants' profits, but none was allowed for cartage. For vicissitudes of season and unprofitable areas, a deduction of 1/6th was made in respect of dry lands. For wet lands deductions of 10, 13½ and 20 per cent were made for II, III and IV class sources respectively. The commutation rates were fixed with reference to the rates prevailing during the 20 years ending with fasli 1274 and worked out as shown below :—

	Price per garce.
Paddy ..	.. Rs. 107
Early Cholam	.. Rs. 129
Variga ..	.. Rs. 107
Cumbu ..	.. Rs. 107

19. The outturns of the different crops were very carefully fixed with reference to crop experiments conducted over a series of years. The cultivation expenses ranged from Rs. 10-8-0 to Rs. 9-3-2 for paddy, Rs. 5-4-0 to Rs. 2 for Variga, Rs. 2-15-0 to Rs. 1-8-0 for cholam and Rs. 2-5-0 to Rs. 1-4-0 for Cumbu. The rates of assessment ranged from Rs. 5 to annas 0-4-0 in respect of dry lands and Rs. 10 to 2-8-0 in respect of wet lands.

20. *Features of First Resettlement.*—The period of 30 years for which the original settlement was introduced in the Guntur portion of the Krishna district having expired in 1902-03, the resettlement was introduced from 1904-05. In carrying out the resettlement, it was found necessary to alter the existing frame-work of the settlement in the case of the deltaic tracts and the Vinukonda taluk, while in respect of the other upland taluks, the old frame-work was retained with, but slight adjustments.

21. *The Delta.*—It was decided to discontinue the practice of treating lands irrigated under the Krishna western delta system as dry and charging only water cess. As in the case of the Krishna district, all lands from which it was payable to exclude Government water and which had been under wet cultivation for five years previously, were ordered to be registered as wet and assessed at the appropriate wet rates.

22. The following further changes were introduced.

23. The lands were reclassified and placed in the alluvial, the regar and the arenaceous series. Five sorts were recognised except under the alluvial and the regar varieties. Under the former, a special sort I-A was also introduced for the very rich lands, while under arenaceous variety only three sorts were fixed. 53% of the soils fall under the alluvial, 22% under regar and 25% in the arenaceous series. Dry lands were placed in two groups, the lower groups comprising the villages on the sea-board not so favourably situated in respect of communications, etc., and those villages in which the dry lands had deteriorated from the saline efflorescence due to the surrounding irrigation. The irrigation sources were classified and placed in four classes to meet cases of defective drainage and deficient water supply. White paddy was taken as the standard crops for wet lands. For dry lands black paddy and cholam were taken in equal proportions as the standard crop instead of cholam and varaga adopted at the original settlement. In the case of white paddy, the average yield of the various soils was determined with reference to the average outturns adopted at the resettlement of Godavaris and Krishna districts while in the case of the dry grains the yield was deducted from the outturn adopted at the last settlement. A deduction of 10% in the case of wet, and 20% in the case of dry lands was made for vicissitudes of season and unprofitable areas. A further deduction of 15% was made for cartage and merchants' profits. Cultivation expenses were determined by numerous local enquiries. They ranged from Rs. 14 to Rs. 5 in the case of wet and Rs. 8-8-0 to Rs. 3 in the case of dry lands. The commutation rates were based upon the prices for 20 years ending with F. 1312. The price of black paddy which was not recorded was taken to be 19% less than that of white paddy. The commutation rate fixed was Rs. 122 for white paddy, Rs. 100 for black paddy, and Rs. 199 for cholam. The resulting rates of assessment ranged from Rs. 12-8-0 to Rs. 2 for wet and Rs. 6 to Re. 0-4-0 for dry lands.

24. *Vinukonda taluk.*—The soils which were reclassified were placed in the regar and red-ferruginous series, with five sorts under each. Dry lands were placed in two groups, the second group comprising those villages, less favourably situated in respect

of communications and markets. Irrigation sources were graded in four classes according to their capacity. White paddy was taken as the standard crop for wet lands and cumbu for dry. For the former, the outturns were based on those fixed at the old settlement and for the latter on the experiments made in the adjoining districts. Deductions of 15% for cartage and merchants' profits and of 25% for vicissitudes of season were allowed. Cultivation expenses varying from Rs. 20 to Rs. 10-8-0 for wet lands, and from Rs. 7 to Rs. 4-4-0 for dry lands were also deducted. The commutation rates worked out on the basis of prices for 20 years ending fasli 1312 was Rs. 140 for White paddy and Rs. 173 for cumbu. The rates of assessment ranged from Rs. 8 to Rs. 2 for wet lands and from Rs. 2-8-0 to Rs. 4 in the case of dry lands.

25. *Uplands (Except Ongole taluk).*—The existing frame work of the settlement was not interfered with and except for the reclassification of a few irrigation sources, the resettlement took the form of a percentage enhancement of the old rates. The prices of the standard grains had increased by 25% in the case of Narasaraopet, Guntur, Bapatla and Tenali taluks and by 20% in Palnad and Sattenapalli taluks. The resulting rates of assessment ranged from Rs. 9-6-0 to Rs. 2-4-0 for wet lands and Rs. 5-10-0 to Re. 0-5-0 for dry lands. The lands classed as 'permanently improved' at the old settlement were inspected and an approximate classification was assigned in each case. Lands which were treated as permanently improved, owing to such exceptional causes as proximity to village site, advantages of situation, etc., and not on account of the existence of a private well, were retained under the head permanently improved; while lands which were classed as permanently improved, owing to the existence of a private well, were transferred to the ordinary series.

26. *Ongole taluk.*—The resettlement did not effect any drastic change in the existing settlement except for increasing the allowance of 10% made at the original settlement for merchants' profits to 15% to include cost of cartage. Reclassification of irrigation sources was done to a certain extent. The prices of standard crops showed increases ranging from 25 to 56%. The rates were raised by 18-3/4% in respect of wet and dry lands except in the case of dry lands lying between the Buckingham canal and the sea, which were exempted from enhancement. The resulting rates of assessment ranged from Rs. 4-12-0 to Re. 0-4-0, in the case of dry lands and from Rs. 8-5-0 to Rs. 2-15-0 in the case of wet lands

27. A comparative table of the money rates of the Original and Resettlements is given below :—

DELTA

Wet		Dry		Lankas and Padugais.	
Original Settlement	Resettlement	Original Settlement	Resettlement	Original Settlement	Resettlement.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.
9 8 0	12 8 0	4 8 0	6 0 0	..	10 0 0
	10 8 0		4 8 0	..	8 0 0
to	9 0 0	to	3 8 0	..	6 0 0
	8 0 0		2 8 0	..	4 8 0
4 8 0	7 0 0	0 4 0	2 0 0	..	3 8 0
	6 0 0		1 8 0	..	2 8 0
	5 0 0		1 4 0	..	2 0 0
	4 0 0		1 0 0	..	1 8 0
	3 8 0		0 12 0	..	1 4 0
	3 0 0		0 8 0	..	..
	2 8 0		0 4 0	..	..
	2 0 0		..	..	..

UPLAND

Palnad and Sattenapalli				Guntur, Narasraopet, Bapatla, Tenali.	
Wet		Dry		Wet	
Original Settlement	Resettlement	Original Settlement	Resettlement	Original Settlement	Resettlement
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
7 8 0	9 0 0	4 8 0	5 6 0	7 8 0	9 6 0
6 8 0	7 12 0	3 8 0	4 4 0	6 8 0	8 0 0
6 0 0	7 4 0	3 0 0	3 10 0	6 0 0	7 8 0
5 8 0	6 8 0	2 8 0	3 0 0	5 8 0	6 4 0
5 0 0	6 0 0	1 8 0	2 6 0	5 0 0	5 10 0
4 8 0	5 6 0	1 4 0	2 2 0	4 8 0	5 0 0
3 8 0	4 4 0	1 0 0	1 12 0	3 8 0	4 6 0
3 0 0	3 10 0	0 12 0	1 8 0	3 0 0	3 12 0
2 8 0	3 0 0	0 8 0	1 2 0	2 8 0	3 2 0
1 12 0	2 0 0	0 4 0	0 14 0	1 12 0	2 4 0
..	..	..	0 9 0	..	..
..	..	..	0 5 0	..	..

Guntur, Narasaraopet, Bapatla, Tenali Dry		Vinukonda Wet		Vinukonda Dry	
Original Settlement	Resettlement	Original Settlement	Resettlement	Original Settlement	Resettlement.
Rs. a. p.	Rs. a. p.		Rs. a. p.		Rs. a. p.
4 8 0	5 10 0	..	8 0 0	..	2 8 0
3 8 0	4 6 0	..	7 0 0	..	2 0 0
3 0 0	3 12 0	..	6 0 0	..	1 8 0
2 8 0	3 2 0	..	5 8 0	..	1 4 0
2 0 0	2 8 0	..	5 0 0	..	1 0 0
1 12 0	2 4 0	..	4 0 0	..	0 12 0
1 8 0	1 14 0	..	3 8 0	..	0 8 0
1 4 0	1 10 0	..	3 0 0	..	0 4 0
1 0 0	1 4 0	..	2 8 0	..	..
0 12 0	1 0 0	..	2 0 0	..	..
0 8 0	0 10 0	..	..	..	..
0 4 0	0 5 0	..	..	..	..

28. *Features of II Resettlement.*—The Second Resettlement was undertaken in this district about the year 1935. The percentage enhancement of the rates of assessment proposed on a consideration of prices were not given effect to. Changes regarding reclassification of soils and irrigation sources in certain cases, transfer of lands from dry to wet, revision of grouping, etc., were given effect to. In classifying or reclassifying soils, the system of classification adopted at the last resettlement was followed with the modification, that in classifying permanently improved lands in the ordinary series, special sorts such as 3-1A, 4-1A as the case may be were introduced when it was found that the lands could not be adequately assessed with the ordinary soil classification and table of rates.

29. *The Estates Abolished.*—The addition of the Ongole taluk of the Nellore district to the Guntur district on 1-10-1904 has brought with it 58 villages of the Venkatagiri estate, which is the only Zamindari in the district. These estate villages have been taken over by the Government. They have been surveyed, settled and converted into ryotwari on the same principles enunciated in the latest resettlement notification in force. The settlement rates have been introduced in these villages of the district on 1-7-1958.

KRISHNA DISTRICT

Introductory

Krishna district takes its name from the great river Krishna, which forms its western and southern boundary. The district is bounded on the north by the Nalgonda, Khammam and West Godavari districts on the east by the Bay of Bengal and on thewest, by the Krishna River. The old Krishna district was bifurcated into Krishna, and West Godavari districts in 1925. The present Krishna district consists of 10 taluks, *viz.*, (1) Bandar, (2) Divi, (3) Gudivada, (4) Kaikalur, (5) Vijayawada, (6) Gannavaram, (7) Nandigama, (8) Tiruvur, (9) Nuzvid and (10) Jaggayyapet, with four revenue divisions of Vijayawada, Nuzvid, Gudivada and Bandar. The district is between 15° 43′ and 17° 10′ of the northern latitude and 80° and 81° 33′ of the eastern longitude. It has an area of 3,496 sq. miles with a population of 17,79,484 (the density of population being 509 per sq. mile). The headquarters of the district is Chilakalapudi (Masulipatam). The details of the land utilisation in the district are as follows :—

		Acres
1.	Geographical area (by village papers) ..	22,36,805
2.	Forests	2,24,576
3.	Barren and uncultivable land	3,19,620
4.	Land put to non-agricultural uses	87,272
5.	Cultivable waste	63,755
6.	Permanent pastures	47,355
7.	Miscellaneous trees, crops and groves not included in net area sown	60,571
8.	Current fallows	1,01,263
9.	Fallow land other than current fallows ..	23,812
10.	Net area sown	13,08,581
11.	Area sown more than once	2,49,396

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2. The district may be divided into two distinct zones *viz.*, delta and upland. The dividing line runs from Vijayawada along the Eluru canal. The taluks of Bandar, Divi, Gudivada, Kaikalur, Gannavaram and a small portion of Vijayawada taluk form the delta area and the taluks of Nandigama, Jaggayyapeta, Tiruvur, Nuzvid and the rest of Vijayawada taluk form the upland area.

3. The Collair lake, is an extensive depression of about 150 sq. miles in extent, lying in the northern part of Kaikalur taluk and into it flows all the drainage of the surrounding country. From August to December, the water spread extends to about 250 sq. miles. The lake never dries up. In summer after the level goes down large tracts of area exposed are cultivated with paddy by pumping water from the drains.

4. In the delta area, the staple crop is white paddy. Sugarcane is an important commercial crop grown on a considerable area in Gannavaram, Gudivada and Divi taluks.

5. In the upland area, paddy, groundnut, tobacco and chillies are the important crops. Paddy is raised mostly under tanks depending on the monsoon.

6. In the district there is about 55 miles of broad gauge and 77 miles of metre gauge railway. There are 1,650 miles of roads, comprising 94 miles of National Highways, 78 miles of State Highways, 314 miles of major district roads and 1,164 miles of district and village roads. The total mileage of navigable canals in the district is 369½ miles.

7. *Soils.*—The soils, in the delta, are classified into three series alluvial, black-regar, and arenaceous. A major portion of the delta is alluvial. In the uplands, the soils are classified as permanently improved (due to the proximity to the village site, advantages of situation, and the existence of a private well), regar and red ferruginous. The south-west portion of the Gudivada taluk, the deltaic portion of Vijayawada taluk and the portion of the Divi taluk adjoining the Krishna river have alluvial soils. The rest of the tract is arenacious. In the uplands, regar is extensive in the non-deltaic portion of Vijayawada taluk and in the Nandigama and Jaggayyapet taluks. Red ferruginous and all the three soils exist largely, in the other upland taluks.

8. *Rainfall.*—For the purpose of rainfall, the year may be divided into the following four seasons. The average rainfall that occurred during the seasons, is shown against them.

Season	Months	Average rainfall (*in inches*)		
		From 1894 to 1924	1955-56	1956-57
1. Winter period	January & February	0.67	..	..
2. Hot weather period	March to May	2.74	4.2	..
3. South-West Monsoon ..	June to September	25.38	25.9	..
4. North-East Monsoon ..	October to December	8.63	15.0	..
	Total ..	37.42	45.1	53.79

Average rainy days .. 50
The normal rainfall is .. 37.00 inches.

9. *Irrigation.*—Prior to 1840, the Krishna district like the Godavari was frequently a victim of bad famines. In 1832-33 a terrible famine ravaged the district and the continuous famine of 1840-41 followed after some more bad years. The recurring famines, the decreasing population and the dwindling revenue spurred the Government to action and Sir Arthur Cotton who constructed the Godavari anicut constructed an anicut across the Krishna river in 1855 at Vijayawada, with two canals supplying the two sections of the delta, on either bank of the river. The river Krishna is the main source of irrigation in the district. It rises in the western ghats near Mahabaleswar in Bombay State and runs southwards. It traverses 475 miles before falling into the sea. At Vijayawada, 47 miles from the mouth of the river Krishna, the anicut was constructed across the river in a gorge of 1300 yards in width in a low range of gneissic hills and its waters are turned out into a net work of irrigation canals, which spread throughout the delta. The eastern delta has an area of about 1160 square miles and stretches as far north as Collair lake. The western delta is about 950 square miles and extends to the south as far as Peddaganjam in Guntur district. The Krishna-Eluru canal in the eastern delta connects the Godavari-Eluru canal in the north and the Commamur canal of the western delta joins the Buckingham canal in the south. The Divi island was irrigated with water pumped from the river by diesel engine driven pumps. Pumping from the river was the practice till 1935 when the "Campbell Aqueduct" was constructed at Puligedda to carry the Krishna East Bank canal across the river to Divi. The canal now irrigates by direct flow the entire ayacut in the Divi island. The "Campbell Aqueduct", at Puligedda, is the longest reinforced concrete bridge in India and carries a road way 16 feet wide and a foot path 4 feet wide.

10. The Muniyeru, a tributary of the Krishna above the Vijayawada anicut which passes through the Nandigama taluk from north to south as an anicut at Polampalli and irrigates large extents in Nandigama and Jaggayyapeta taluks. Budameru, Tammileru and Patamata Pumping Scheme are some other sources of irrigation. In the uplands, irrigation is carried out by tanks and wells. In the villages bordering the sea, water is stored in pits and used for irrigation. The Collair lake and its outlet the Upputeru, also serve as sources of irrigation. The irrigation potentialities of the district have increased with the completion of the Prakasam Barrage at Vijayawada. This barrage is chiefly intended to replace the existing anicut which suffered damage during the floods of 1952 and also to assure supply for irrigation. Incidentally, this will also help to bring in an additional ayacut of 4,600 acres in the delta area of the district. In this district the drainage facilities are not adequate. The rivulets Budameru, Tammileru, Ramileru and Gunderu, collect drainage and flow into Collair lake. The other

important drains are Yerrakalva, Ayanampudi drain, Sivaganga drain, Lazzabanda drain, Chandrayya and Kamoravolu drains. These drains need improvements and repairs. Large extents of fields are submerged every year for want of proper drainage facilities. The details of the extent of land damaged by inadequate drainage and the remission granted during the last 10 years in the district are furnished below :

Fasli	Extent in acres	Amount of remission in rupees
1356	4,985	29,737
1357	15,639	1,04,837
1358	2,535	9,708
1359	21,199	1,11,165
1360	Not available	
1361	7,048	30,798
1362	1,564	9,894
1363	632	3,623
1364	6,879	36,012
1365	12,117	69,117
1366	18,422	1,66,176

11. The details of the area irrigated in the district are as follows :—

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Sources of water supply	Number of sources	Area irrigated during 1955-56
		Acs.
1. Government canals	11	6,38,991
2. Tanks	559	1,17,784
3. Wells	1,369	5,152
4. Other sources		4,940
5. Total net area irrigated		7,66,867
6. Area irrigated more than once in the same year.		68,299
7. Total gross area of crops irrigated		8,35,166

12. *Cultivation.*—(*a*) *Delta area.*—The local rainfall has less influence on the paddy harvests of the delta than the rains in the

catchment of the river Krishna. The Krishna freshes arrive as a rule in June before "Yeruvaka Pournami" and the river is in full floods during July and August. If the floods come in before 'Pournami', the prospects of paddy crop in the delta will be bright. Wet paddy is the staple food crop. Sugarcane is an important commercial crop grown in a considerable area around Vuyyur Sugar Factory. The fertile area in Vijayawada, Gannavaram and Divi taluks yield excellent crops of sugarcane.

(*b*) *Upland area.*—Paddy, Groundnut, Tobacco and Chillies are the staple crops. Paddy is raised mostly under tanks which depend on the monsoon. Irrigation is also done under wells.

13. The particulars of the total area sown both in delta and upland areas at different periods, are as follows :—

Year	Total area sown	Area cropped more than once	Net area sown
	Acres.	*Acres.*	*Acres.*
1912-13	21,33,281	2,92,816	18,40,465
1930-31	12,28,623	1,27,793	11,00,830
1954-55	15,72,284	2,53,336	13,18,948
1955-56	15,57,977	2,49,396	13,08,581

14. The crop calendar showing the sowing, harvesting and peak marketing seasons of some of the important crops of the district, is given below :—

Name of the crop	Sowing	Harvesting	Peak Marketing
1. Paddy	June-August	November-December.	January-June
2. Cholam	September-October	January-February.	March-June
3. Sajja	July	September-October	January-March.
4. Sugarcane	March-April	February-April.	April-June
5. Onions	July-October	December-March-May	January-June
6. Chillies	September	March	April-June
7. Tobacco	October	February	April-June
8. Redgram	July-August	January-February	March-April
9. Groundnut	July-August	October-November	December-January.

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15. *Cost of Cultivation.*—The cost of cultivation worked out during the settlement and resettlement are as follows :

	Cost of cultivation per acre for			
	Wet crops		Dry crops	
	From	To	From	To
	Rs.	Rs.	Rs.	Rs.
Original Settlement	14 0 0	6 8 0	8 0 0	2 10 0
Resettlement :—				
I. Alluvial	13 0 0	8 0 0	7 8 0	4 14 0
II. Permanently improved	13 0 0	9 4 0	7 0 0	4 4 0
Black regar :—				
III. Clay	10 8 0	7 0 0	6 4 0	3 10 0
IV. Loam	12 0 0	7 8 0	5 8 0	3 4 0
V. Sand	9 4 0	6 8 0	4 4 0	2 10 0
Red :—				
VII. Loam	..	..	4 14 0	2 14 0
Arenaceous :—				
XII Loam	9 4 0	7 8 0	4 4 0	3 4 0
XIII Sand	8 0 0	7 0 0	3 10 0	2 14 0
XIV. Heavy sand	7 8 0	6 8 0	3 4 0	2 10 0
Second Resettlement	1927	Not considered.		

16. The Collector of Krishna district and the Director of Agriculture, have given the cost of cultivation as noted below :—

Name of the crop (1)	Cost of cultivation per acre of crop raised in Delta area. (2)	 Uplands (3)
Collector:	Rs.	Rs.
1. Paddy	120	105
2. Sugarcane	975	..
3. Groundnut	115	90

(1)		(2)	(3)
		Rs.	Rs.
4. Tobacco (Virginia)	..	..	305
5. Cholam ..	..	..	135
6. Chillies ..	..	..	240
N.E.S. Seed Farm, Tiruvur			
Paddy ..	..	182.80	..
Cholam ..	..	35.00	..

17. *Prices.*—The average prices of the important crops at different periods are as follows :

Grains	*Price per garce of* 3,200 *Madras Measures.*				
	During the original settlement in 1864	During the I Resettlement in 1899	During the II Resettlement in 1931	During the decennium ending 1945-46	During the decennium ending 1955-56
(1)	(2)	(3)	(4)	(5)	(6)
Delta :	Rs.	Rs.	Rs.	Rs.	Rs.
White Paddy ..	..	118	241	347	798
Black Paddy ..	..	96	192	..	..
Cholam	..	170	371	590	985
Uplands :					
White Paddy ..	90	145	235	372	870
Cholam	95	216	328	594	1,009
Cumbu	70	173	286	509	1,061
Ragi	..	..	..	487	1,098

18. *The Yields.*—The gross outturn of several crops are as follows :—

	Gross outturn per acre in Madras measures of			
	Paddy	Cholam	Sajja	Ragi
Original; Settlement reports (1864) ..	1,150 to 240	520 to 100	280 to 80	..
Resettlement	(N. A.)	..	..	..
Bureau of Statistics, 1955-56 ..	700	91	154	231
Officials	1,003	251	..	..
Non-officials	989	..	..	..

19. *Seasonal Conditions.*—The district suffered from famines during the periods of November 1790 to November 1792, 1823-24 and 1832 to 1834. The seasonal conditions were adverse during 1876 to 1878, 1891, 1897 and 1899. The upland taluks of the district again suffered from famine during 1918-19. The district as it is now constituted may be regarded as famine proof, although some distress may be caused in the upland portions by the failure of monsoons.

20. *Holdings.*—The number of land holdings in the district is 2,40,404 and the area covered by them is 11,51,813 acres. Details of holdings classified according to the assessment payable are furnished in the statement below :—

Holdings assessed to	NUMBER			Extent in acres	Assessment in rupees
	Single	Joint	Total		
(1)	(2)	(3)	(4)	(5)	(6)
Re. 1 and less ..	19,100	10,899	29,999	27,477	28,424
Rs. 10 and less but over Re. 1.	75,333	44,527	1,19,860	3,34,940	7,06,752
Rs. 30 and less but over Rs. 10.	32,041	26,344	58,385	2,98,434	9,92,853
Rs. 50 „ 30 ..	9,746	8,682	18,428	1,87,151	6,56,252
Rs. 100 „ 50 ..	5,529	4,992	10,521	1,45,006	6,50,277
Rs. 250 „ 100 ..	1,555	1,154	2,709	98,735	4,06,781
Rs. 500 „ 250 ..	232	173	405	38,679	1,41,522
Rs. 1,000 „ 500 ..	39	45	84	16,338	69,683
Over Rs. 1,000 ..	9	4	13	5,053	19,840
Total ..	1,43,584	96,820	2,40,404	11,51,813	36,70,384

Features of the Original Settlement 1864

(Mr. F. W. Morris)

21. The district was divided into two distinct zones of delta and upland. The taluks and villages covered by irrigation from the Krishna river is called " Delta " and the rest of the tract is called " Upland ". In the upland taluks consolidated wet rates were imposed on lands irrigated by rainfed tanks and other sources but in the case of irrigated dry lands of the delta, the assessment, instead of being consolidated, was made up of a uniform water rate and a land assessment, the latter being calculated with reference to the outturns of dry grains and all the lands in the delta were classified as dry in the accounts. There were, however, two exceptions to the uniform water rate in respect of lands in the Divi island and those in the Collair lake. The soils were classified as noted below.

Tract	*Classification*
1. Delta ..	(1) Alluvial, (2) Permanently improved, (3) Regar and (4) Arenaceous.
2. Upland ..	(1) Alluvial, (2) Permanently improved, (3) Rega and (4) Ferruginous.

These classifications were further subdivided into sorts. Each class in the alluvial and regar series had three sorts and other soils including the permanently improved lands had only two sorts.

22. Dry grouping of villages was made entirely with reference to differences in the fertility of the soils and not with reference to proximity to markets and facilities of communication, etc. Three groups were adopted for delta and only one group was adopted for the upland. No gradations or groups were adopted under wet in delta. In the upland tract all irrigation sources were placed in the third class and no attempt was made to class each tank or other source separately.

23. Under dry, black paddy, cholam and cumbu were taken as the standard crops. For wet lands in the upland tract, white paddy was adopted as the standard crop. In arriving at the outturns, no distinction was made between delta and upland tracts.

24. An allowance of one-sixth or16⅔% of the gross produce in the first and second group villages, was made for deductions for vicissitudes of season and unprofitable areas.

25. The dry rates for the villages of the first and second group villages were fixed at Rs. 3-8-0 to Re. 0-6-0 per acre and for the third group villages, they were fixed at Rs. 3-0-0 to Re. 0-4-0. The

consolidated wet rates for the upland tract, were fixed from Rs. 6-0-0 to 2-8-0.

26. In the delta, a uniform water rate of Rs. 3 was fixed. This was raised to Rs. 4 in 1865 and to Rs. 5 in 1895-96 pending the resettlement of the tract. In a few villages however, in consideration of the disadvantages arising from defective drainage, the rate was continued at Rs. 4.

Features of the Resettlement

FIRST RESETTLEMENT OF 1899 (MR. M. ADINARAYANA AYYA)

27. The resettlement of the district followed the lines in the Godavari. The division of the district into upland and delta tracts was retained. The Divi island, however, was not included in the delta as there was then no scope of its being irrigated by canals from the Krishna anicut. The lands in the deltaic tract were classified under three main series, alluvial, regar and arenaceous, but a small extent in the Vijayawada taluk was placed in the red ferruginous series. Each class of the alluvial and the regar series was further subdivided into five sorts, while the classes of arenaceous series were subdivided into three sorts each. Irrigation sources were divided into four classes with reference to conditions of irrigation and drainage. For purposes of dry assessment, the delta tract was divided into three groups. Black paddy and cholam were adopted as standard crops for dry lands. After allowing a deduction of 15% on account of merchants' profits and charges of transport, commutation rates of Rs. 118 and Rs. 96 per garce for white and black paddy respectively and Rs. 170 per garce for cholam, were adopted. An allowance of 10% for wet and 20% for dry lands was made on account of the vicissitudes of season and unprofitable areas included in the holdings. Cultivation expenses were fixed at Rs. 13 to Rs. 5 per acre for wet and at Rs. 7-8-0 to Rs. 2-4-0 per acre for dry lands. The rates of assessment per acre in the delta ranged from Rs. 10-0-0 to Rs. 2-8-0 for wet lands, from Rs. 5-0-0 to Re. 0-4-0 for ordinary dry lands, from Rs. 7 to Rs. 2 for padugai lands and from Rs. 9 to Rs. 2-8-0 for lanka lands.

28. There was no reclassification of soils or of irrigation sources in the uplands. The old rates of assessments were enhanced by 33⅓%. The revised rates per acre in the uplands ranged from Rs. 7-8-0 to Rs. 2-8-0 for wet and from Rs. 3-12-0 to Rs. 0-5-0 for dry lands, while those in the Divi island ranged from Rs. 4-4-0 to Re. 0-4-0.

Features of the Second Resettlement, 1931

(MR. B. G. HOLDSWORTH)

29. During the second resettlement of the district, the classification of soils and irrigation sources made during the first resettlement were retained except in respect of (1) lands transferred from dry to wet and *vice versa*, (2) large waste blocks of unclassified lands in the tail-end villages and (3) the cultivable lands on the margins of Collair lake which had been occupied on sivaijama. One deviation was, however, made in the case of irrigation sources of Kaikalur taluk. The irrigation sources in the second or third class were placed in the third or fourth class on account of the drainage difficulties.

30. In the upland tract, lands under regular irrigation from the Muniveru project were registered as wet and assessed at wet rates applicable to lands under second class in the Krishna delta, while lands which were within the influence of the project but which had not yet been brought under irrigation were assigned a suitable dry classification in the scale sanctioned for the villages of the second group in the delta.

31. Subsequent to the first resettlement, a pumping station for supplying water for irrigation, was erected in the year 1908 at the north of Divi island. Unlike other systems of irrigation, this scheme was very costly, in that, the engines had to be frequently renewed and the working expenses were also great. Instead of treating the lands served by this system as wet as would have been done under any other system, the lands were classified as irrigated dry and a uniform water rate of Rs. 6 per acre was fixed. Since 1931 the rate has been increased to Rs. 6-4-0 per acre.

32. A comparative table of money rates of the original settlement, the first and second resettlements, is given below :

DELTA

Wet Lands			Dry Lands		
Original Settlement	First Resettlement	Second Resettlement	Original Settlement	First Settlement	Second Settlement
1	2	3	4	5	6
No wet .. classification.	10 0 0	11 14 0	3 8 0	5 0 0	5 15 0
	9 0 0	10 10 0	3 0 0	4 0 0	4 12 0
	8 0 0	9 8 0	2 8 0	3 0 0	3 8 0
	7 0 0	8 4 0	2 0 0	2 8 0	3 0 0
	6 0 0	7 2 0	1 12 0	2 0 0	2 6 0
	5 0 0	5 15 0	1 8 0	1 8 0	1 11 0
	4 8 0	5 4 0	1 4 0	1 4 0	1 6 0
	4 0 0	4 12 0	1 0 0	1 0 0	1 2 0
	3 8 0	4 2 0	0 12 0	0 12 0	0 14 0
	3 0 0	3 8 0	0 10 0	0 8 0	0 9 0
	2 8 0	3 0 0	0 8 0	0 4 0	0 5 0
			0 6 0		
Lanka Lands			Padugai Lands		
	9 0 0	10 10 0	..	7 0 0	8 4 0
	7 0 0	8 4 0	..	5 0 0	5 15 0
	5 0 0	5 15 0	..	4 0 0	4 12 0
	4 0 0	4 12 0	..	3 0 0	3 8 0
	3 0 0	3 8 0	..	2 8 0	3 0 0
	2 8 0	3 0 0	..	2 0 0	2 6 0

UPLANDS

Wet			Dry		
Original Settlement	First Resettlement	Second Resettlement	Original Settlement	First Resettlement	Second Resettlement
6 0 0	6 4 0	7 7 0	3 0 0	3 12 0	4 3 0
5 0 0	5 8 0	6 8 0	2 0 0	2 8 0	2 13 0
4 8 0	4 12 0	5 10 0	1 12 0	2 2 0	2 6 0
4 0 0	4 4 0	5 1 0	1 8 0	1 14 0	2 2 0
3 8 0	3 12 0	4 7 0	1 4 0	1 8 0	1 11 0
3 0 0	3 0 0	3 8 0	1 0 0	1 4 0	1 6 0
2 8 0	2 8 0	3 0 0	0 12 0	1 0 0	1 2 0
2 0 0	..	..	0 8 0	0 10 0	0 12 0
..	..	..	0 4 0	0 5 0	0 5 0

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33. *Estates Abolished.*—All the estates in the district have been taken over by the Government. In the estate areas of Bandar, Divi, Gudivada, Kaikalur, Vijayawada, Nandigama and Jaggayyapet taluks, survey and settlement operations have been completed and settlement rates have also been introduced from 1-7-1958. In respect of the estate areas of Tiruvur, Nuzvid and Gannavaram taluks, the survey and settlement operations have not yet been finalised.

KURNOOL DISTRICT

Introductory

Kurnool is one of the districts of the Rayalaseema and is economically backward. It lies between 14° 55′ and 16° 20′ of the northern latitude and 77° 20′ and 79° 35′ of the eastern longitude. It is bounded by Mahaboobnagar district and Guntur district on the north, Guntur and Nellore districts on the east, Anantapur and Cuddapah districts on the south and

Bellary district of Mysore State on the west. The area of the district which is the biggest in Andhra Pradesh State is 9,215 sq. miles. The population is 16.19 lakhs and the density of the population is 174 per sq. mile. There are four Revenue Divisions in the district comprising 11 taluks and 2 sub-taluks.

Division	*Taluk and sub-taluks*
1. Kurnool	1. Kurnool.
	2. Nandikotkur.
	3. Dhone.
2. Adoni	1. Pattikonda.
	2. Adoni.
	3. Alur.
3. Nandyal	1. Nandyal.
	2. Koilkuntla.
	3. Allagadda (Sirvel).
	4. Banganapalli (sub-taluk).
4. Markapur.	1. Markapur.
	2. Giddalore (Cumbum).
	3. Atamkur (sub-taluk).

The district can be divided geographically into three homogeneous tracts separated by two ranges of hills, *i.e.*, Nallamalais and Erramalais. The eastern tract comprises of the Markapur and Cumbum taluks. It gets the benefit of the North-East monsoon. Part of this tract suffers from feeble rainfall but in some places it is made good by numerous wells. The central tract living between the two ranges of hills comprises of Koilkuntla, Sirvel, Nandyal and Nandikotkur taluks and Atmakur and Banganapalli sub-taluks. It is the fertile portion of the district and is served by the K-C Canal. The third tract is the western division, consisting of the taluks of Kurnool, Dhone, Pattikonda, Alur and Adoni. The taluks of Kurnool, Dhone and Pattikonda are studded with hillocks which are barren with sparse growth here and there. Srisailam temple on the banks of the River Krishna situated in the midst of Nallamalai hills is one of the important ancient temples in the country.

The chief cottage industry of the district is weaving of cotton carpets, cotton cloth and woollen cumbalies. In Yemmiganur, Kodumurand Gudur, a few varieties of silk fabrics are prepared. The manufacture of writing slates is an important cottage industry in Markapur.

The land utilisation of the area in Kurnool district for the year 1955-56 is as follows :—

	Acs.
Geographical area	58,94,616
Area of forests	16,94,477
Barren and uncultivable land	2,96,269
Land put to non-agricultural uses	1,34,042
Cultivable waste	4,75,055
Permanent pastures	25,425
Land under miscellaneous trees, crops, and groves not included in the net area sown	10,076
Current fallows	2,20,514
Other fallow lands	1,12,977
Net area sown	29,25,781
Area sown more than once	1,40,101

2. *Soils.*—The varieties of soils met with in the district are clayey, loamy and sandy under regar and red types. In the eastern section the poor red soil predominates. The central section is rich in regar, Pattikonda and Dhone taluks of the western section have poor soil, while Kurnool taluk of western section and portions of Pattikonda taluk are rich in regar soil. The pure regar soil is very fertile and its capacity for moisture retention is great. The chief crops grown in regar soil are cholam, cotton, indigo, korra, bengal-gram and onions. In Adoni and Alur taluks fertile mixed soils (black-red) are found.

3. *Rainfall.*—Both the south-west and the noth-east monsoons are active in this district and their distribution is as follows:—

Season	*Rainfall during* 1955-56
South-West Monsoon	23.5″
North-East Monsoon	5.2″
Winter period	0.1″
Hot weather period	2.8″
Total	31.6″

The average rainfall figures of the district during the years from 1949-50 to 1955-56 are given below :—

1949-50	33.70	inches
1950-51	22.70	,,
1951-52	31.60	,,
52-53	14.70	,,
53-54	20.70	,,
54-55	25.20	,,
55-56	31.60	,,

The area west of Nallamalais gets more rain in the south-west monsoon and that to the east of Nallamalais gets more rain during the north-east monsoon. The south-west monsoon breaks out in June and lasts till September. It is thereafter followed by the north-east monsoon. Generally the south-west brings on more rain than the north-east. Normal rainfall of the district is 24.2".

4. *Irrigation.*—The chief rivers in the district are the Tungabhadra, the Krishna, the Hundri, the Kundu, the Gundlakamma and the Sagileru. The Tungabhadra river rises in the Western Ghats and enters the district at the north-western corner of Kurnool taluk and flows on the northern boundary of the district till it falls in the river Krishna which later flows along the northern boundary of the district. The Hundry river rises in the Pattikonda taluk and flows across Pattikonda and Kurnool taluks and falls in the Tungabhadra at Kurnool. The Kundu river rises on the western side of the Erramalais and flowing north-east across Nandyal taluk, turns south and flows across Nandyal and Koilkuntla taluks and the North-western corner of Allagadda taluk entering Cuddapah district eventually to join the Pennar. The Kurnool-Cuddapah canal and the Tungabhadra Project are the two major irrigation projects in this district. The K-C canal takes off from the Tungabhadra river at Sunkesula, 18 miles west of Kurnool and passes through the taluks of Kurnool, Nandikotkur, Nandyal, Allagadda and Koilkuntla before entering the Cuddapah district. The canal was designed to irrigate one lakh acres. It is expected that a total extent of 3 lakhs of acres will be commanded by the improvements to the K-C canal executed at a cost of Rs. 4 crores. The Cumbum tank in Cumbum taluk, Markapur tank and Siddapuram tank in Atmakur sub-taluk are the biggest tanks in the district. There are 638 minor irrigation sources in this district irrigating an area of 23,563 acres. The various types of irrigation sources and the area irrigated by them in the district for the year 1955-56 are given below :

Sources of water supply.	*Area irrigated*
	Acres.
1. Government canals	53,664
2. Tanks	59,956
3. Wells	10,589
4. Other sources	30,113
5. Total area irrigated	1,54,322
Area irrigated more than once	2,417
Gross area irrigated	1,56,739

5. *Cultivation.*—Food crops are grown in 68.6 per cent of the total cultivated area. Paddy, Cholam and Korra are the chief cereals. Arika is also largely grown in Nandikotkur, Allagadda, Cumbum and Markapur taluks. Cumbu and Ragi are also largely

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6. *Cost of Cultivation.*—The particulars gathered are tabulated hereunder:

	Paddy Rs.	*Korra* Rs.	*Jonna* Rs.
1. Settlement-scheme reports :			
(*a*) Original settlement ..	18 0 0 to 3 10 0	6 11 4 to 1 1 0	6 11 4 to 1 1 0
(*b*) Resettlement ..	18 0 0 to 12 4 0	4 2 0 to 0 12 0	4 9 10 to 1 1 0
2. Director of Agriculture :			
(*a*) T.B.P. area ..	230.36	63.44	..
(*b*) Seed Farm, Kurnool ..	250.00	65.00	52.00
3. Collector	260.00	56.50	46.00

7. *Prices.*—The average prices (per garce of 3200 m.m.) of few important crops at different periods are given below:

Product	*Original Settlement*	*Resettlement*	1943-46 10 *years*	1956-57 10 *years.*
	Rs.	Rs.	Rs.	Rs.
Paddy	142	156	350	1,082
Cholam	148	154	..	776
Arika	105	110	..	..

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8. *Yields.*—Estimates of the gross outturn of several crops are given below:

Sources	*Paddy* *M. Ms.*	*Cholam*	*Arika*
1. Original settlement reports ..	1450–300	500 to 60	320–80
2. Resettlement reports ..	1100–550	360–60	..
3. Director of Agriculture—Seed Farm, Kurnool ..	1534	230	..
*4. Bureau of Statistics and Economics	673	138	
5. Collector	1280	192	
†6. Officials	1253	335	
†7. Non-Official .. .	1178	315	

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* From statistical abstract 1955-56 on the basis of random sampling method adopted.

† From the answers to the questionnaire.

9. *Seasonal conditions.*—The district lies in the heart of the famine zone. All the taluks are liable to famine and the outturn of all but the irrigated crops on cultivated area depends on the vagaries of the monsoon. If the rainfall is fair and properly distributed there can be no doubt that the district can raise a supply of food crops ample for its own consumption and a large surplus for storage or export. However the rainfall is too frequently deficient and badly distributed.

The following are the famine years:

1833 ..	.. Severe famine
1854 ..	.. Famine to some extent
1866 ..	.. Famine
1876-78 ..	.. ,,
1891-92	.. ,,
1896-97 ..	.. ,,
1900 ..	.. ,,
1904—draught	..
1921-22 distress	.. Remission of kist Rs. 1,32,214. Relief Rs. 59,846. Charity Rs. 3,996-8-0.
1937-38	.. Famine
1942-43	.. Famine.

The particulars of remissions granted during the last five years are given below :

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Name of the fasli	Remissions under B.S.O. 13	Spl. remission B.S.O. 14
Fasli 1362	.. 37,726 plus 42,206	79,932
,, 1363	.. 10,198	
,, 1364	.. 23,896	
,, 1365	.. 15,202	
,, 1366	.. 71,375	

10. *Holdings.*—The total number of holdings in this district is 3,02,750 and the extent covered by them is 23,62,440 acres. Out of a total number of 3,02,750, the number of holdings having an assessment of Rs. 10 and less is 2,32,350. It is, therefore, evident that this district has a large percentage of small holdings.

The details regarding holdings are given below.

Holding assessed to	Single Patta	Joint patta	Total	Extent in acs.	Assessment in Rs.
One Rupee & less ..	30,927	34,574	65,501	1,03,171	60,874
Rupees ten and less but over Re. 1.	79,148	87,701	1,66,849	8,79,097	7,57,222
Rupees thirty and less but over Rs. 10.	23,135	30,793	53,928	6,54,727	7,48,277
Rupees fifty and less but over Rs. 30.	5,648	5,422	11,070	2,49,768	3,44,267
Rupees hundred and less but over Rs. 50.	2,118	2,159	4,277	1,79,692	2,39,111
Rupees 250 and less but over Rs. 100.	488	397	885	82,009	1,26,459
Rupees 500 and less but over Rs. 250.	92	92	184	40,741	51,425
Rupees 1,000 and less but over Rs. 500.	41	12	53	18,487	30,628
Over Rs. 1,000 ..	3	..	3	2,945	4,177
			3,02,750	22,10,637	23,62,440

Features of Original Settlement of Kurnool District

The original settlement of the taluks of Kurnool district was done at different periods from 1863 to 1905, as shown below:

Year	*Taluk*
1863 ..	.. Dhone Kurnool Nandikotkur Nandyal Sirvel and Koilkuntla
1868 ..	.. Cumbum and Markapur
1870 ..	.. Pattikonda.
1890 ..	.. Aluru Adoni
1905 ..	.. Banganapalli.

In these settlements, with the exception of a small area classified as permanently improved, the soils were all classified under the two main series of regar and red ferruginous.

The villages were grouped with reference to relative fertility of the soil.

Paddy was taken as the staple food crop for wet lands. Jonna for dry lands in regar soils and Arika and Korra in red soils were taken as the staple food crops.

The usual deduction of 25% was made for vicissitudes of seasons.

The cultivation expenses ranged from Rs. 18-0-0 to Rs. 3-10-0 in wet lands and from Rs. 6-11-4 to Rs.1-1-0 in dry lands.

The grain outturns ranging from 300 to 1,450 M.Ms. of paddy in wet lands and from 60 to 500 M.Ms. of cholam and from 80 to 320 M.Ms. of korra in dry lands were assumed.

In Alur and Adoni taluks, irrigation sources were divided into five classes according to capacity of the source. In other taluks this was not done but the villages were formed into groups.

The money rates ranging from Rs. 2-8-0 to Rs. 10-0-0 for wet lands and from Re. 0-4-0 to Rs. 5-0-0 for dry lands were adopted.

For lands irrigated by baling a deduction of Re. 1 per acre for the first crop and annas eight for the second crop was allowed.

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Resettlement

All the taluks except Alur and Adoni were resettled during the years 1905 to 1909 and the Alur and Adoni taluks during 1920.

(*a*) *Dry lands.*—No change was made in the classification of soils or in the grouping of villages except in the following cases.

(*i*) Permanently improved lands:—Dry lands which were classified at the time of original settlement as 'permanently improved' were transferred to appropriate classes and sorts.

(*ii*) Lands left unclassified or registered as poramboke at the last settlement which were subsequently granted on patta and assessed by the Revenue Department were classified.

(*iii*) All waste lands wrongly registered as poramboke at the time of original settlement were also classified.

In carrying out the classification of the above lands, the principles in the original settlement were followed.

(*b*) No increase was made in dry rates in respect of Pattikonda, Koilkuntla, Markapur and Cumbum taluks, in consideration of the economic conditions prevailing in these taluks. But in the case of Dhone, Kurnool, Nandikotkur, Nandyal and Sirvel taluks, the average prices of standard grains, *viz.*, cholam and arika during the last 20 non-famine years showed an increase of 59 and 87 per cent respectively. Hence dry rates were increased by 7.55 per cent.

In the resettlement the money rates ranged from Rs. 2 to Rs. 10 for wet and from Re. 0-4-0 to Rs. 4 for dry lands.

(*a*) As the system of grouping of irrigation sources at the original settlement was inelastic, they were classified into five classes according to their conditions and capacity.

(*b*) At the original settlement all wet lands in Dhone, Kurnool, Nandyal, Nandikotkur and Sirvel taluks were assessed as dry but at resettlement this system was abolished and a consolidated wet assessment was imposed on all wet lands.

(*c*) Under the K.-C. canal, lands which had been cultivated continuously for five years with wet crops or from which water could not be excluded, were registered as wet. Under other sources, all lands which in normal years receive water, and all lands registered as dry which were so situated in the midst of wet lands from which water could not be excluded, were registered as wet. To secure this, ayacuts were thoroughly revised.

(*d*) *Manavari lands.*—Lands with no recognised sources of irrigation but cultivated with wet crops depending entirely on rain were classed as dry and assessed one sort higher than ordinary 'dry lands' of similar soil.

Water rate

(*a*) Differential water rate system is in force in this district.

(*b*) *Second crop charge on lands registered as wet.*—The charge for the second crop on lands registered as 'single crop' wet will be half the single crop wet assessment but the ryots holding lands under sources of the second, third, fourth and fifth classes were given option to compound the charge for the second crop.

For sugarcane, betel, plantains and other wet crops which ordinarily remain on the ground for more than six months, the charge to be levied will be one and half times the difference between the wet and dry rates plus half the dry assessment. The charge for irrigated dry crops which remain on the ground for more than six months will be half the difference between the wet and dry rates.

(*c*) *Water rate on lands not registered as wet.*—All owners of commanded lands not registered as wet, have to pay water-rate equal to the difference between the wet and the dry assessments when water is taken for wet crops and one-third of such difference when dry crops are irrigated.

(*d*) *Lands under doruvu wells.*—Wet and dry classification was assigned to all lands commanded by doruvu wells. They were registered as "irrigable dry" and assessed at the appropriate dry rate. When water is utilised, a water rate of half the difference between the wet and dry assessments with a baling remission of half the water rate is charged.

Features of Second Resettlement of Kurnool District in 1935

(BY MR. STUART.)

(1) No general reclassification of soils was made except those transferred to assessed wastes since the last resettlement.

In reclassifying the above lands, the system of classification adopted at the last settlement was followed.

(2) *Classification of irrigation sources.*—There was no general reclassification of irrigation sources at the resettlement in respect of I and II class sources and the then existing classification was retained unaltered but all the third and fourth class sources in the district were reclassified according to their capacity. Sources recognised by the Revenue Department subsequent to the last resettlement was also classified according to their capacity.

(3) It was proposed to increase wet assessment by 6¼% and dry assessment by 12½% per cent but they were not given effect to in view of the orders issued in G.O. Ms. No. 1067,Revenue, dated 12-5-1937.

(4) *Revision of ayacuts:*—(*i*) *Sources other than K-C canal.*

(*a*) *Transfer from dry to wet* :—There was no general revision of wet ayacuts but the existing ayacuts of Cumbum and Markapur tanks were refixed on the following principles. Lands registered as 'dry' which were regularly cultivated with wet crops for five years or from which water could not be excluded were transferred to wet.

(*b*) Land registered as wet which owing to their situation or for any other reason, were unfit for wet cultivation were transferred to dry. Wet lands deliberately rendered unfit for wet cultivation not because the supply of water was inadequate but because the growing of dry crop was more profitable were retained as wet. A note to this effect was made in the resettlement registers.

(*ii*) *K-C. canal.*—At the last resettlement, in order to encourage the irrigation of wet crops in the area commanded by the K.-C. canal, the system of consolidated water-rate was introduced but it proved unsuccessful. Hence the ayacuts under K.-C. canal were revised on the following principles.

(*a*) Lands registered as wet but which had not been under continuous cultivation for five years ending with fasli 1345 were transferred to dry on the application of registered holders.

(*b*) All dry lands which had been regularly cultivated for five years ending with fasli 1345 with white paddy or wet or garden crops with the aid of water from the canal or its distributaries or tanks fed by the canal were registered as wet, in consultation with the P.W.D.

(*c*) Where portions of fields were eligible for transfer to wet or dry, the minimum limit for subdivision was fixed as 25 cents. In effecting the subdivision, the ryots were given the option of locating the portion which had to be subdivided.

(*d*) The following concessions were shown to such lands transferred to wet under K.-C. canal granted under the block rules.

(*i*) They were assessed at a rate fixed for the next lower sort than that assigned at the resettlement.

(*ii*) The additional dry assessment of Re. 1 per acre collected on the un-irrigated portions was abolished.

(5) The existing grouping of dry lands was retained, except in ten villages of Markapur taluk which were transferred from group II to group III.

(6) *Manavari lands.*—These lands were registered as dry and assessed at the dry rate appropriate to the soil classification already assigned at the last resettlement.

(7) *Lands within the water spread of irrigation sources.*—The lands were classified as dry and assessed at a special rate intermediate between the wet and dry rates.

The Madras Estates Abolition Act, 1948

The survey and settlement operations in respect of the Inam Estates abolished and taken over under the provisions of the Act XXVI of 48 are in progress.

General

A major portion of the district is in the famine zone with a rainfall of less than 25″ per year. As the soils are fertile, the northern portion of the district might become more prosperous after the ayacut is fully developed under the T.B. Project. The area commanded by the K-.C. canal has a look of prosperity compared to the rest of the dry tracts.

KURNOOL DISTRICT MONEY RATES

Taram	Wet rates		Dry rates							
			Kurnool proper rates		Cumbum and Markapur rates		Pattikonda rates		Koilkuntla rates	
	Rs.	a.	Rs.	a.	Rs.	a.	Rs.	a.	Rs.	a.
1	10	0	2	8	3	0	3	0	4	0
2	9	0	2	0	2	4	2	8	3	0
3	8	0	1	8	1	8	2	0	2	4
4	7	0	1	4	1	4	1	12	2	0
5	6	0	1	0	1	0	1	8	1	12
6	4	8	0	12	0	12	1	4	1	8
7	3	8	0	8	0	8	1	0	1	4
8	3	0	0	4	0	6	0	12	1	0
9	2	8	..		0	4	0	8	0	12
10	2	0	..		..		0	4	0	8
11	..		..		..		..		0	4

Scheme sanctioned in G.O. No. 501, Rev., dated 2nd June 1905, for Kurnool proper.

do. G.O. No. 1034, Rev., dated 14th April 1909, for Cumbum and Markapur.

do. G.O. No. 710, Rev., dated 25th July 1906, for Pattikonda.

do. G.O. No. 882, Rev., dated 11th September 1906, for Koilkuntla.

Rates introduced in Kurnool proper in faslis 1315-16 (1905-06 and 1906-07)

do. Cumbum and Markapur in F. 1319 (1909-10)

do. Pattikonda in F. 1316 (1906-07).

do. Koilkuntla. do.

KURNOOL DISTRICT MONEY RATES

Alur and Adoni taluks

Taram	Wet rates	DRY RATES		Remarks
		Black soil taluks	Red soil taluks	
	Rs.	Rs.	Rs.	
1 ..	13 0 0	2 13 0	2 8 0	Scheme sanctioned in G.O. Nos. 1332, Rev., dated 21st July 1922 and in 373, Rev., dated 6th March 1925.
2 ..	11 4 0	2 4 0	2 0 0	
3 ..	10 10 0	1 11 0	1 2 0	Rates introduced in black soil taluks in F. 1333 (1923-24) and in red soil taluks in F. 1334 (1924-25).
4 ..	10 2 0	1 2 0	0 14 0	
5 ..	9 8 0	0 14 0	0 9 0	
6 ..	9 0 0	0 9 0	0 6 0	
7 ..	8 4 0	0 6 0	0 4 0	
8 ..	7 14 0	0 4 0	0 2 0	
9 ..	7 2 0	..	..	
10 ..	6 12 0	..	..	
11 ..	5 15 0	..	..	
12 ..	5 10 0			
13 ..	4 12 0			
14 ..	4 8 0			
15 ..	3 6 0			
16 ..	2 13 0			
17 ..	2 4 0			
18 ..	1 11 0			
19 ..	1 2 0			

NELLORE DISTRICT

Introductory

Nellore district derives its name, from the word 'Nell' which means paddy. It was also known in olden days as "Vikrama Simhapuri"

It lies between 13° 30′ and 16° of the northern latitude and 79° 5′ and 80° 15′ of eastern longitude. It is bounded on the north by the Guntur and Kurnool districts ; on the east by the Bay of Bengal ; on the south by the Chittoor and Chingleput districts and on the west by Cuddapah and Kurnool districts.

River Pennar flows through the district from west to east entering the district at Somasila in Atmakur Taluk and falls into

Bay of Bengal at Vutukuru in Kovur taluk, 18 miles away from the Nellore town after flowing for a distance of 70 miles in the district.

There are two big reservoirs in this district, *viz.*, Kanigiri reservoir in Kovur taluk and the Mopad reservoir in Kanigiri taluk besides the two big tanks of Nellore and Survepalli in Nellore taluk and numerous other P.W.D. and Minor Irrigation tanks to serve the needs of wet ayacut.

The headquarters of the district is Nellore. The district comprises 4 revenue divisions and thirteen taluks with a total population of 17,95,632 and an area of 7,960 sq. miles.

Name of the Revenue Division	*Taluks*
1. Nellore ..	.. Nellore, Atmakur, Rapur.
2. Gudur ..	.. Gudur, Sulurpet, Venkatagiri.
3. Kavali ..	.. Kavali, Udayagiri, Kovur.
4. Kandukur ..	.. Kandukur, Kanigiri, Podili, Darsi.

The district is noted for its mica mines. Gypsum is being extracted from Pulicat lake in Sulurpet taluk. China clay is obtained in Rapur and Atmakur taluks and there are ceramic factories at Gudur and Nellore. Salt is largely manufactured in the salt factories at Tada, Oolapalem and Krishnapatnam.

The land utilisation in this district as per the statistics published for the year 1955-56 is furnished below.—

		Area in acres
1.	Total geographical area	50,94,198
2.	Barren and uncultivable land	17,26,007
3.	Land put to non-agricultural uses	3,46,367
4.	Permanent pastures and other grazing lands ..	3,77,306
5.	Cultivable waste	2,18,136
6.	Trees, miscellaneous crops and groves ..	49,783
7.	Current fallows	2,72,436
8.	Other fallow lands	89,764
9.	Net area sown	16,06,863
10.	Area sown more than once	1,93,539

The district forms part of the plains of Carnatic and the terrain is undulating. The coastal taluks of Kandukur, Kavali, Kovur, Nellore, Gudur and Sulurpet lie from north to south along the coast. The western taluks of Darsi, Podili, Kanigiri, Udayagiri, Atmakur, Rapur and Venkatagiri taluks lie adjacent to them. The coastal area is generally a sandy plain with large tracts of scrub jungle interspersed with palmyrahs and casurina plantations. On the south-east corner of the district, the island of Sriharikota with an area of about 210 sq. miles forms a low ridge of sand containing jungle growth and casurina plantations which supply fuel to Madras.

The eastern half of the district along the coast is fairly fertile with large cultivated areas and handsome topes; whereas the western half is a rather barren area with large tracts of low scrub jungle rocky hills and plains littered with stones. The Buckingham canal running along the coast is utilised for transporting considerable quantities of paddy and fuel from this district and from other northern districts to Madras.

The Veligonda hills form part of the western boundary with the highest peak of 3,000 ft. The Udayagiri hill which rises to a height of 3,079 feet, is reputed to contain rare and valuable medicinal herbs.

2. *Soils.*—The district can be divided into three parts, *viz.*, (*i*) eastern portion (*ii*) western portion and (*iii*) coastal portion. The eastern portion is fairly *fertile and prosperous.* The western portion comprises wide stretches of *barren treeless country.* The coastal strip which is generally of 3 to 4 miles in width is *sandy.*

Inferior red loam covers most of the area in this district except the northern portion of Kandukur, Darsi and Podili taluks in which *black clay* is found. The distribution of soilsis as follows:

Soil	*Percentage*
Black clay	22.38%
Black & Red loams	63.16%
Sandy	13.27%

3. *Rainfall.*—The district lies in a zone of precarious rainfall. The year may be divided into four seasons and the rainfall statistics are given below :

Seasons	Months	Average from 1870-1939	Rainfall 1940-55	1955-56
South-West Monsoon	June-September	11.24	..	11.9
North-East ,,	Oct.-December	22.33	32.27	4.6
Winter period	January-February	1.57	..	0.8
Hot weather period	March-May	..	..	4.3

The average rainfall in 1955	44.1 inches
The average rainy days in 1955	50 days
The normal rainfall	35.5 inches.

The South-West monsoon gives less than a third of the total rainfall in a year whereas the N.E. monsoon which brings the bulk of the rainfall is beneficial to crops. The northern taluks of Kanigiri and Kandukur get the benefit of both the monsoons and in the southern taluks the north-east monsoon is of greater importance. The rainfall is the heaviest during the north-east monsoon. (October-December.)

4. *Irrigation.*—There are six rivers in the district. The Musi, the Paler and the Manner flowing through the northern part of the district, the Kandleru, Swarnamukhi and Kalangi in the south, besides the Pennar. Open channels from each feed tanks and serve as irrigation sources.

The largest tanks in the district are Machavaram and Ponnalur tanks in Kandukur taluk, Zutur in Kavali taluk, the Mopad reservoir and Hajipuram tank in Kanigiri taluk, the Kanigiri reservoir in Kovur taluk, the Survepalli, Nellore and Manubolu tanks in Nellore taluk; the Anantasagaram, the Kaluvoy and A.S. Beeraperu tanks in Atmakur taluk and the Kota Penaka, Gudur and and Yerur tanks in Gudur taluk. Of these, the Kanigiri reservoir, Mopad reservoir, Survepalle and Nellore tanks, the Anantasagaram and Hajipuram tanks are the biggest and serve the needs of a major portion of wet ayacut in the district.

The sources of water supply and the area irrigated therefrom in the district are given below as per the statistics of 1955-56:

Source of water supply	*No.*	*Area irrigated in acres*
1. Government canals	19	2,51,490
2. Canals	..	779
3. Tanks	522	3,09,034
4. Wells:	..	..
Government 737 65 Private 5,744 4,055	..	70,974
5. Other sources	..	11,941
Total net area irrigated	..	6,44,218
Area irrigated more than once	..	1,93,539
Total gross area of crops irrigated	..	8,37,757

Of the tanks, 284 have an ayacut of more than 100 acres each and the remaining 238 less than 100 acres.

5. *Cultivation.*—Paddy, Cholam, Cumbu, Ragi, Korra and Varagu are the chief food crops usually grown in the district. Samaiand Maize are grown in limited extents. Gingelly and Tobacco are also grown to some extent.

The total area covered by cultivation of food crops is 16,39,304 acres whereas under non-food crops it is 1,85,702 acres. Out of this extent of non-food crops, an extent of 41,480 acres was utilised for fodder crops. Chillies are grown extensively under wells in Sulurpet and Gudur taluks.

A statement showing the details of crops raised in the different seasons in a year is given below :

Name of crop	*Sowings*	*Harvesting*	*Peak Marketing*
Paddy	Aug.-Jan.-Feb.	Jan.-February April-May.	March-June
Bazra (Cumbu)	June-July	Sept.-October	Jan.-March,
Jowar	Nov.-December	March-April	May-June.
Ragi	Dec.-January	March-April	May-June
	June-July	October	November.
Korra	July-September	Oct.-Dec.	January.
Sugarcane	May	April	May & June.
Chillies	September	March	April-June.
Tobacco	October	February	April-June.
Groundnut	July-October	Oct.-January	Jan.-February.
Castor	July-August	Jan.-March	April
Gingelly	June-July	Sept.-October	Nov.-December

Particulars of area sown at different periods in Nellore district are furnished below :

At the time of original settlement (1905-1906)	At the time of Resettlement (1905-1906)	At present times (1956)
4,37,071 Acs.	8,98,370 Acs.	16,06,863 Acs.

Paddy is the chief food crop raised in the deltaic portion and parts of Atmakur, Kanigiri, Kavali and Gudur taluks. Next come Cholam, Cumbu and Ragi crops.

6. *The cost of cultivation.*— The costs of cultivation per acre are given hereunder from the particulars gathered.

Source & year	Paddy	Cholam	Sajja	Varagu	Ragi
1. Original settlement (1874)	10 8 3 to 9 3 2	3 11 1 to 1 7 11	2 4 6 to 1 3 8	2 2 5 to 1 6 7	.. .. ..
2. Resettlement (1905-06)	.. 10 8 3 to 9 3 2	2 14 1 to 1 7 11	2 4 6 to 1 3 8	5 3 2 to 2 0 4	..
3. Furnished by D.A.O., Nellore 1958	154 0 0	96 0 0	170 0 0	67 0 0	156 0 0
4. Collector, Nellore 1956-57 Delta	..226 0 0	..	136 0 0	..	..
5. Upland irrigated	..170 0 0	85 0 0	..	..	..

7. *The prices.*—The average prices of a few important food grains at different periods have been as follows :

Per garce

Products	Original settlement	Resettlement 1905-06	Present times 1946-56
	Rs.	Rs.	Rs.
White Paddy	125 0 0	143 0 0	848 0 0
Black Paddy	110 0 0		
Jonna	143 0 0	172 (late) 161 (early)	879 0 0
Arika	78 0 0	95 0 0	782 0 0
Variga	121 0 0	167 0 0	934 0 0
Sajja	127 0 0	167 0 0	780 0 0
Horsegram	130 0 0	..	942 0 0

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8. *Yields.*—The gross outturn of several important crops in the district is furnished below :—

Name of the crop	At the time of original settlement M.Ms. *	At the time of Re-settlement M.Ms. *	Present day (M.Ms. per acre)		
			Director of Bureau of Statistics †	Officials ‡	Non-Officials ‡
Paddy	500 to 1,000	500-800	882	1,076	928
Cholam	80 to 375	70-340	245	438	279
Ragi	..	..	193	546	693
Sajja	60 to 325	60-325	295	453	553

Sources :

* Original and Resettlement Reports.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

‡ From the answers to the questionnaire.

9. *Seasonal Conditions.*:—The several years of seasonal calamities in the district are furnished below :—

Partial drought	1803
Famine	1806-1807
Damage to crops by rats and vermins	1808
Unfavourable year	1812
Cyclone	1820,1857,1915, 1927 and 1933
Distress	1823-24
The Guntur famine	1832-34
Unfavourable season	1853-54
The great famine	1876-78
Famine	1891-92
Famine	1897-98
Control for food movements	1918
Scarcity	1926-27
Bad season in Gudur taluk	1934
Floods-Inundation of Pennar	1804
Floods	1852,1874, 1882, 1902, 1903.
Floods	1946
Floods	1954
Floods	1957

It is seen from the above that the district has been subjected to various kinds of calamities causing great loss to ryot and Government. Government had to remit large amounts of land revenue due to famine besides granting other kinds of relief to the people. Floods in several rivers including the chief river Pennar and the frequent failure of the monsoons also are causes of distress.

A statement showing the particulars of remissions granted during the previous five years is appended.

10. *Holdings.*—The total number of holdings in the district is 3,65,117 out of which 1,90,691 are single and 1,74,426 are joint covered by an extent of 17,26,781 acres with an assessment of Rs. 31,29,709.

Of the above holdings a major number of holdings about 2/3 of the total number in the district *i.e.*, 2,25,243 pay less than Rs. 10 and the rest over Rs. 10.

A statement of holdings is appended.

Features of the Original Settlement (1872-74)

(By Mr. RUNDALL)

11. The leading features of the original settlement are as follows.

(*i*) The soils were generally divided into three sorts except classes II, VI, XII, XIII and XIV to each of which only two sorts were assigned, while class III was distinguished by four sorts, with an extra sort for second group dry. (*ii*) The grouping was chiefly based on the fertility of the soil and not with reference to facilities of communications and proximity to markets and roads. No allowance was made for vicissitudes of season in the case of wet lands under first class irrigation sources, while in the case of dry lands a deduction of 1/6 was made instead of 1/4 as in the neighbouring districts. (*iii*) The scale of cultivation expenses for wet lands was not so liberal as in the adjoining districts and that for dry lands was moderate. (*iv*) A deduction of 10% was made from the average prices in the case of wet lands for cartage and merchants' profits instead of 15% as in recent settlements. (*v*) The average rates of assessment per acre for *dry* and *wet* lands are :

	Rs.	a.	p.
Dry ..	1	3	7
Wet ..	5	5	0

The district was divided into the 'Principal Division' and the 'Sub-division', the former comprising the taluks of Nellore, Gudur, Kavali, Udayagiri, Atmakur and Rapur; and the latter Kanigiri, Kandukur together with Ongole taluks subsequently transferred to Guntur district. The settlement scheme reports were finalised in 1874. The settlement was introduced in the principal division in 1873 and in the subdivision in 1874.

The term of thirty years expired in the Principal Division in 1902 and in the subdivision in 1903.

12. *Resettlement in* 1905-06.—Mr. Paddison, I.C.S., the then Settlement Officer took up the work in 1905 and submitted proposals to Government which were approved by the Government in 1906.

The following table shows the comparative figures of commutation prices of the standard crops adopted by the Settlement Officer. Fifteen per cent on the prices of twenty non-famine years ending with 1903-04 was deducted for cartage and merchants' profits.

Divisions	Standard grains	COMMUTATION PRICES		Difference	Percentage
		Original settlement	Resettlement		
Dry					
Principal Division Southern part subdivision	Late Cholam	129	172	43	33
	Arika	64	95	31	48
Southern part subdivision	.. Variga	107	167	60	56
	Cumbu	107	167	60	56
	Early Cholam	129	161	32	25
Wet					
Whole district	.. Paddy	107	143	36	34

No reclassification of the soil was considered necessary, except in the case of lands assessed by the Revenue Department during the currency of the previous settlement and lands assessed as 'permanently improved' at the old settlement. Four resumed inam villages (one in Gudur, two in Atmakur and one in Kandukur) and large areas of cultivated lands which were left unclassified at the original settlement were all classified for the first time. Cultivable lands which had been left unclassified and unassessed at the old settlement and had not been assigned, were now classified and assessed. In regard to 3,227 acres which were registered as "baling" they were transferred to dry as there was no wet cultivation in those lands for five years. On 'baling wet lands' (of which there were 2,552 acres) a remission of one rupee per acre for the first crop and eight annas for the second was allowed. The Settlement Officer also recommended 15% enhancement for the greater portion of the district, the exceptions being the anicut villages which are supplied from storage reservoirs (25%), the rest of the anicut villages of Nellore and Gudur and the best villages in Kandukur (20%) and the worst parts of Kavali and Atmakur and the best part of Udayagiri (10%). No enhancement was recommended in Kanigiri and the greater portion of Udayagiri taluk. The changes were not many and were not due to any mistakes in the old settlement, but simply due to the fact that the villages recommended for special treatment had experienced harder times than the rest of the tract under notice, or on the other hand have been specially benefited by the new communications.

Twenty five rates for wet and 32 rates for dry were recommended. Government were in favour of a percentage enhancement but objected to the introduction of multiplicity of money rates with unnecessary five gradations. They preferred a general enhancement of 3 annas in the rupee or 18¾% in view of the backwardness of the district in many respects and the uncertainty of the rainfall. They suggested a revision of the grouping of irrigation sources into five classes and of villages into five groups.

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As regards dry lands there was no enhancement of assessment in the taluks of Kanigiri, Udayagiri, Rapur, Atmakur and in some coastal villages of Nellore, Gudur, Kavali and Kandukur. The more westerly portions of these taluks (Kandukur and Kavali) were exempted from increased taxation while in the other portions of these taluks the assessment was increased by 12½ %.

As regards wet lands, though the price of paddy increased by 34% and the completion of the Sangam Project and other irrigation works had rendered wet cultivation more secure and there had been great improvement in the communications, Government fixed 18¾% as the proper rate of enhancement for the whole district. The resettlement resulted in a total increase of 15% in the land revenue demand with 18% in case of wet lands and 9.5% in case of dry lands. The revised money rates were introduced in F. 1316 and were in force for

30 years (1906-1936). A comparative statement of money rates of original and resettlements is given below :—

MONEY RATES

Original Settlement					Resettlement				
Taram	Wet		Dry		Taram	Wet		Dry	
	Rs.	a.	Rs.	a.		Rs.	a.	Rs.	a.
1	10	8	5	0	1	8	14	4	8
2	10	0	4	8	2	8	5	4	0
3	9	0	4	0	3	7	11	3	15
4	8	0	3	8	4	7	2	3	8
5	7	8	3	0	5	6	8	3	6
6	7	0	2	8	6	6	4	3	0
7	6	8	2	4	7	6	0	2	13
8	6	0	2	0	8	5	15	2	8
9	5	8	1	12	9	5	10	2	4
10	5	4	1	8	10	5	8	2	0
11	5	0	1	4	11	5	5	1	15
12	4	12	1	0	12	5	0	1	12
13	4	8	0	14	13	4	12	1	11
14	4	0	0	12	14	4	8	1	8
15	3	8	0	10	15	4	2	1	6
16	3	0	0	8	16	4	0	1	4
17	2	8	0	6	17	3	9	1	2
18	2	0	0	4	18	3	8	1	0
					19	2	15	0	14
					20	2	8	0	13
					21	2	6	0	12
					22	2	0	0	11
					23	..		0	10
					24	..		0	9
					25	..		0	8
					26	..		0	7
					27	..		0	6
					28	..		0	4

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Second Resettlement : Nellore District

The resettlement work was taken up in this district in 1934. But it was stopped in 1939 pending a final decision of the Government on their Land Revenue policy.

13. *Estates Abolition Act.*—One of the biggest Zamindaris in the State *viz.*, Venkatagiri zamindari is in this district in which nearly half the area is covered by estates.

The progress of survey and settlement operations in the estates of Venkatagiri, Chundi and in all other minor estates taken over under the provisions of the Zamindari Abolition Act, XXVI of 1948 is as follows :

Settlement rates have been introduced in the estates situated in Sulurpet taluk from 1-7-57 and in estates situated in Nellore, Kovur, Rapur, Atmakur, Gudur, Venkatagiri, Podili and Darsi taluks with effect from 1-7-58.

In respect of the remaining estates taken over in Nellore district, it is proposed to be introduced from 1-7-59.

Consequent on the integration of the Estate Offices with regular Revenue units, Rapur taluk is taken away from Gudur Division and added on to Nellore Division.

General.—The south-eastern half of the district, is well developed while the western taluks are still backward due to very inferior soils. One food crop is grown once in three years in Udayagiri on account of poor soils. A casual tourist passing through the district will gain an impression that except in Kovur and Nellore there are only pastures and scrub jungles. The Pennar delta area is really prosperous and on account of its proximity to Madras is comparatively more advanced. The mica mines and salt factories provide adequate work for the labourers in the south of the district.

Statement showing the amounts of remission granted under different categories during fasli 1362 *to* 1366 *in Nellore district.*

Fasli	1362			1363			1364			1365			1366		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Shavi	..			37,160	15	3	20,954	4	3	1,76,564	8	3	23,933	4	2
Thirva Kammi	..			11,680	10	0	9,715	14	0	23,458	12	3	2,186	7	0
Waste	..			13,262	2	9	1,715	13	9	22,184	1	7	9,353	1	1
Mulam ryot	..			4,845	3	0	5,620	8	0	7,758	0	0	7,791	8	8
Submerged or Inundated	..			714	10	0	202	11	0	..			245	0	0
Fasli Kammi	..			153	5	0	102	6	0	78	11	0	0	6	0
Fixed Remission	794	11	8	794	11	8	602	6	0	1,198	6	0	1,177	12	3
Remission granted for lands taken-up for public purposes	38	11	0	38	11	0	38	11	0	38	11	0	..		
Free hold	24	0	0	24	0	0	24	0	0	24	0	0	24	0	0

Details of pattas bearing different Assessments in

Nellore district

Holdings assessed to	NUMBER		Total	Extent Acs.	Assessment Rs.
	Single	Joint			
Re. 1 and less	38,260	32,703	70,963	1,06,937	1,11,137
Rs. 10 and less but over Re. 1	80,280	74,000	1,54,280	5,54,538	6,61,593
Rs. 30 „ „ Rs. 10	51,729	45,297	97,026	4,88,986	8,89,991
Rs. 50 „ „ Rs. 30	10,903	15,095	25,998	2,22,427	5,35,673
Rs. 100 „ „ Rs. 50	5,001	4,379	9,380	1,55,685	3,77,976
Rs. 250 „ „ Rs. 100	4,080	2,574	6,654	1,28,618	2,96,619
Rs. 500 „ „ Rs. 250	370	311	681	60,862	1,69,856
Rs. 1,000 „ „ Rs. 500	64	64	128	26,825	77,504
Over Rs. 1,000	4	3	7	1,963	9,360
Total ..	1,90,691	1,74,426	3,65,117	17,26,781	31,29,709

SRIKAKULAM DISTRICT

Introductory :—Srikakulam is the northern-most district of the State of Andhra Pradesh. The district was reconstituted in 1950 having been carved out of the old Visakhapatnam district. While forming the Orissa State in 1936, six taluks of the Chicacole (Srikakulam) district had been separated from the Ganjam district and added to the Visakhapatnam district. The district lies between 18° 20′ and 19° 10′ of the northern latitude and 83° 25′ and 84° 50′ of the eastern longitude. It is bounded on the north and west by the State of Orissa, on the east by the Bay of Bengal and on the south by the Visakhapatnam district. This is a small district with an area of 3,899 square miles consisting of three revenue divisions with 11 taluks. It has a population of 2,123, 136. Considering its density of population *viz.*, 544 per sq. mile it is a thickly populated district. The revenue divisions and the taluks under each are given below.

Name of the Revenue Division	Headquarters of the Revenue Division	Name of the taluk
Tekkali	.. Tekkali ..	Sompeta. Itchapuram. Tekkali Pathapatnam.
Srikakulam ..	.. Srikakulam ..	Narasannapeta Srikakulam Chipurupalli
Parvathipuram ..	.. Parvathipuram	Palakonda. Parvathipuram Bobbili Salur

Portions of Parvathipuram, Palakonda and Salur taluks consist of hilly areas known as agency tracts occupied mainly by hill tribes. The taluks of Itchapuram, Sompeta, Tekkali, Narasannapeta, Srikakulam and Cheepurupalli are on the coast. The district may be roughly divided into two natural divisions namely the agency and the plains. The parts of the agency area lie in portions of Palakonda, Parvathipuram and Salur taluks. The coastal taluks include extensive sandy tracts. The Eastern ghats run roughly parallel to the sea-coast from the north-east and the country drains from the ghats to the sea.

There are cashewnut factories and salt factories in Tekkali taluk and sugar factory in Bobbili taluk. There is also a vegetable oil factory at Sitanagaram in Bobbili taluk. There are manganese mines at Garbham, Garividi, Perepi and Sirvaram villages in Cheepurupalle taluk.

The land utilisation of the area in the district is as follows :

	Acres
Total geographical area	24,91,076
1. Area of forests	4,33,967
2. Barren and uncultivable land	4,52,892
3. Land put to non-agricultural uses	69,490
4. Cultivable waste	2,15,869
5. Permanent pastures	93,796
6. Miscellaneous, trees, crops and groves not included in net area sown.	23,516
7. Current fallows	1,74,521
8. Fallow land other than current fallows	1,02,161
9. Net area sown	9,24,864
10. Area sown more than once	2,86,064

2. *Soils.*—The prevailing rock of the district is a soft pinkish gneiss. Intrusive bosses of granite and diorite are abundant. The soils formed by the disintegration of these rocks are highly ferruginous and often sandy. The soils in the district belong chiefly to the regar or black cotton and red ferruginous series. Each type of soil gradually merges into another and so the classification is rather arbitrary. Near the hills the red varieties are predominant but towards the coast the soil becomes finer and in the richest valleys there is a fertile black clay with a tendency to crack on drying. The distribution of soils in the Government settled areas of the district is given below in thousands of acres.

Taluk	Regar clay	Regar loam	Regar sand	Red loam	Red sand
Palakonda	12.5	16.5	1.8	28.2	12.2
Srikakulam and Narasannapeta	0.8	0.4	0.5	..	0.2
Itchapuram	0.2	..	..	..	0.2

3. *Rainfall.*—The normal rainfall of the district is 42.7 inches. For this purpose the year may be divided into the following four seasons :—

		Average rainfall	Average rainy days
1.	South-West Monsoon (June to Sept.) .	34.0 inches	24
2.	North-East Monsoon (Oct. to Dec.) ..	21.2 „	8
3.	Winter period (January to February) .	0.4 „	1
4.	Hot weather period (March to May) ..	3.2 „	11
	Total ..	58.8	44

The average rainfall of the district during the years from 1950-51 to 1955-56 is given below :

1950-1951	.. 38.70 Inches
1951-1952	.. 41.80 „
1952-1953	.. 39.20 „
1953-1954	.. 46.90 „
1954-1955	.. 46.30 „
1955-1956	.. 58.80 „

There are 964 miles of roads in the district.

Government roads ..	.. 523 miles.
District Board roads ..	.. 393 „

There are 147 miles of broad gauge and 21 miles narrow gauge of Eastern Railway in the district.

4. *Irrigation* (*Rivers*)—The chief rivers in the district are Nagavalli and Vamsadhara. The Vamsadhara rises in the eastern ghats in the Orissa State and enters the district in Pathapatnam taluk and flows between Narasannapeta and Srikakulam taluks. The Nagavalli also rises in the eastern ghats in the Orissa State, and enters the district in Parvathipuram taluk. After flowing across Palakonda taluk, the river forms the boundary between Srikakulam and Cheepurupalli taluks. In the lower reaches it is called Langulya. The Swarnamukhi river flowing from Bobbili taluk is a tributary of the Nagavalli. The other rivers in the district are Bahuda in Itchapuram taluk, the Mahendratanaya in Sompeta and Pathapatnam taluks -and the Vegavathi in Salur taluk.

The Chief sources of irrigation in the district are the Nagavalli or the Langulya, Vamsadhara and Bahuda rivers. A regulator has been built across the Nagavalli at Thotapalli in Parvathipuram taluk from which irrigation channels take off. The Nagavalli with its tributary the Swarnamukhi irrigates large extents in Palakonda, Bobbili and Srikakulam taluks and some extent in Parvathipuram taluk. The Vamsadhara irrigates large extents in

Pathapatnam, Narasannapeta and Srikakulam taluks. The Bahuda irrigated considerable extents in Itchapuram taluk. The irrigation from most of these rivers is by open mouth channels into which waters is diverted by a temporary obstruction known as "Korombo" work which is raised and maintained by ryots under customary labour. Silt clearance in the channels is also attended to by the ryots. The minor irrigation tanks in all the taluks are generally in good repair except in the areas which formed part of zamindaries recently taken over by the Government. Chikati, Mandasa, Tarla, Patha Tekkali, Deyadi and Urlam and parts of Vizianagar and Parlakimidi are some of the important estates in this district which were abolished and taken over. Survey and settlement operations are still in progress in these estate areas.

The sources of water supply and the area irrigated there from in the district are given below :—

	Sources of water supply	*No.*	*Area irrigated*
1.	Government canals	79	100,560
2.	Private canals	17	20,001
3.	Tanks	9,316	250,450
4.	With an ayacut of 100 acres or more ..	1,992	
5.	With an ayacut of less than 100 acres ..	7,324	
6.	Wells :		
	Government (Masonry) ..	..	..
	Private ..	8,702	15,450
7.	Other sources (Spring channels, etc.) ..	..	15,075
8.	Area irrigated more than once ..		137,020
	Total area irrigated ..		538,556

The number of tanks with an ayacut of 10,20,30 acres are shown below :—

	Name of the taluk	*Tanks with an ayacut*		
		Acres 10	*Acres* 20	*Acres* 30
1.	Itchapuram	122	42	20
2.	Sompeta	182	81	49
3.	Tekkali	250	210	134
4.	Pathapatnam	400	117	60
5.	Srikakulam	38	39	28
6.	Narasannapeta ..	139	115	73
7.	Cheepurupalli	1,050	890	1,250

8.	Parvatipuram	430	220	94
9.	Salur	348	169	86
10.	Palakonda	115	80	47
11.	Bobbili	732	387	233

This district has the largest number of tanks in the State.

5. *Cultivation.*—The agricultural year in the district can be divided into three seasons ; namely, 'punasa' the period of the south-west monsoon, when the staple dry grains are sown 'pedda panta', the regular wet crop season from July to December, and 'Payiru' the period from November to April when second dry crops are raised with the aid of north-east monsoon. Cultivation operations of some sort will be proceeding for ten months out of twelve. The 'punasa' crops are by far the most important as they comprise, cumbu and ragi, the staple food of the mass of the people and a failure of the south-west monsoon will be a serious calamity. In several details, the methods of cultivation in Srikakulam district differ from those in the South. Rice fields are often left unmanured for years together but the seedlings are given a good start by plentiful supplies of fertilizers to the seed beds. Along with manures, wild indigo and sunhemp plants are frequently ploughed in when green. Dry land on the other hand, which in the south is often neglected, is here usually plentifully manured, especially with tank silt, and ragi, cumbu and sometimes cholam instead of being sown are transplanted in dry fields from seed beds after rain, the seedlings being put out by hand in a furrow and their roots covered by ploughing another furrow. Paddy is the chief wet crop grown in the district. Dry crops such as ragi, cumbu, cholam, groundnut, jute, etc. are also raised in the district. The rotation of crops generally followed in the dry, irrigated dry and wet lands is indicated below :

	Dry lands	*Irrigation dry lands*	*Wet lands*
1.	Groundnut or jute. ragi or maize followed by horsegram.	Ragi followed by paddy greengram or gingelly.	Sathikam Ragi or paddy or korra or chama or vooda followed by paddy and greengram or gingelly.
2.	Ragi or jute followed by horsegram.		

In the wet lands under the project areas of Palakonda, Parvathipuram, Srikakulam, Narasannapeta, etc., taluks and Uddanam area in Ichapuram taluk, ' sathikam ' or second paddy crop will be raised in wet lands.

The particulars of total area sown at different periods are as follows :

Original settlement 1889	Re-settlement 1919	1956 present times
1,08,664 Acres.	1,72,906 Acres.	*9,24,864 Acres.

*Includes also the figures relating to estate areas taken over by the Government under the Estates Abolition Act, 1948. Original and Resettlement figures do not include the cultivation figures in estate areas.

The crop calendar showing the harvesting and peak marketing seasons of some of the important crops of the district is given below :

Products	Sowing	Harvesting	Peak marketing
Paddy ..	July-Aug. March-April	Nov-December June-July.	January-June August-Sept.
Ragi ..	June-July Jan.-February	Sept.-Oct. April-May	Nov.-December June.
Cholam ..	Sept. October	February	March-June
Korra ..	June-July	Sept.-October	Dec.-January.

6. *The cost of cultivation.*—The particulars gathered are tabulated.

	Paddy			Ragi			Other dry grains			Ground-nut		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1. *Settlement Reports.*												
(*a*) Original settlement, 1889.	9	10	8	4	15	6	4	15	6		..	
		to			to			to				
	6	7	0	2	14	2	2	14	2			

1	2	3	4	5	6
(b)	Resettlement, 1911.	9 10 8 to 6 7 0	4 15 0 to 2 14 2	4 15 0 to 2 14 2	..
2.	Director of Agriculture: Karukupet farm ..	115 0 0	160 0 0	..	..
3.	Collector's report (Tekkali Dvn.)	95 0 0	51 0 0	..	82 0 0
	Narasannapet taluk ..	170 0 0	140 0 0	..	115 0 0

7. *The Prices.*—The average prices of few important crops at different periods have been as follows:

Products	Original settlement 1889	Resettlement 1911	1946-47 10 years' average	1956-57 10 years' average
Paddy ..	120 0 0	197 0 0	..	811 0 0
Ragi ..	141 0 0	217 0 0	..	857 8 0

8. *Yields.*—The gross outturn of several crops gathered from important sources are given below :

Sources	Paddy	Ragi
1. Original settlement reports (1889).	400 to 900 M. Ms.	375 to 160 M. Ms.
2. Resettlement (1911) reports.	400 to 1,000 M. Ms.	375 to 160 M. Ms.
Present Yields		
3. Agricultural officer ..	951 M. Ms.	328 M. Ms.
*4. Bureau of Economics and Statistics.	703 M. Ms.	240 M. Ms.

5.	Revenue Officers ..	853 M. Ms.	394 M. Ms.
†6.	Officials	921 M. Ms.	392 M. Ms.
†7.	Non-officials ..	969 M. Ms.	394 M. Ms.

Sources.—*From the Statistical abstract 1955-56 on the basis of random sampling method adopted.

†From the answers to the questionnaire.

9. *Seasonal conditions.*—The district frequently suffered from famines and scarcity. It experienced a serious dearth of food between November 1790 and 1792. In April 1791, 1200 persons were stated to have died of starvation near Srikakulam. The failure of the two monsoons in 1823 resulted in nearly half the wet land being left uncultivated and in the dry land crops suffered greatly, so that early in 1824 the price of grain was double the normal price. The effects of the Orissa famine in 1865-66 were some what felt in the district. The north-east monsoon failed in 1868 and some anxiety prevailed until the south-west rains of 1869 proved to be favourable. In 1871 again distress threatened the district. The great famine of 1876-78 which brought such terrible havoc in the south of the State was hardly felt in the district. The season of 1885-86 was especially unfavourable. Yet in 1889, the year of the Ganjam famine the district escaped entirely. In 1891-92 there was again considerable scarcity of food. In 1896-97 occurred, the last famine which the district has witnessed.

The district experienced more than its share of floods and storms on account of the long coast and the short courses of the several rivers which rise from the Eastern Ghats which are at a distance of 30 to 40 miles from the coast. The district has been frequently a victim to cyclones, floods and tidal waves.

Earthquakes have been reported in the district on 6th January 1827, 24th August 1859, 19th December 1870, and 31st December 1881, but none of them did any damage.

A statement showing the remissions granted during the last five years is appended below.

Statement showing the particulars of remissions granted during the past five years (fasli 1362-1366).

Fasli 1362	Fasli 1363	Fasli 1364	Fasli 1365	Fasli 1366
Rs. 10,661	Rs. 8,195	Rs. 14,538	Rs. 19,437	Rs. 43,044

10. *Holdings.*—The number of holdings in the district is 65,305 and the area covered by them is 2,21,042 acres. Out of the total number of holdings in the district the number of holdings having an assessment of Rs. 10 and below is 48,629. This is therefore a district of small holdings. The latest particulars are given below:

Statement showing the number of holdings of various values in Srikakulam district.

SINGLE HOLDINGS.

	No. of holdings.	Extent.		Assessment.
		Dry	Wet	
One Rupee and less	8,869	4,389	3,883	6,373
Rs. 10 and less but over Re. 1 ..	17,004	20,102	13,563	69,548
Rs. 30 and less but over Rs. 10 ..	1,797	9,766	3,438	31,152
Rs. 50 and less but over Rs. 30 ..	2,704	4,383	5,982	52,775
Rs. 100 and less but over Rs. 50 ..	1,188	3,573	5,696	62,428
Rs. 250 and less but over Rs. 100 ..	103	692	1,909	14,264
Rs. 500 and less but over Rs. 250 ..	18	1,585	3,571	5,290
Rs. 1,000 and less but over Rs. 500 ..	2	48	234	1,544
Over Rs. 1,000	..	..	..	..
Total ..	31,685	44,538	38,276	2,43,274

JOINT HOLDINGS.

	No. of holdings.	No. of share holders	Extent		Assessment
			Dry	Wet	
			Acs.	Acs.	Rs.
One rupee and less ..	10,771	32,749	4,024	8,409	11,604
Rs. 10 and less but over Rs. 1	11,985	16,001	23,350	3,105	42,633
Rs. 30 and less but over Rs. 10	4,112	10,941	23,439	21,232	1,46,416
Rs. 50 and less but over Rs. 30	4,879	23,157	10,589	13,311	83,457
Rs. 100 and less but over Rs. 50	1,657	8,165	5,168	10,736	1,07,340
Rs. 250 and less but over Rs.100	187	1,368	1,938	3,797	24,718
Rs. 500 and less but over Rs. 250	27	167	836	7,996	7,833
Rs. 1,000 and less but over Rs. 500	2	42	120	178	1,333
Total ..	33,620	92,590	69,464	68,764	4,45,334

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Features of Original and Resettlement.

Original settlements.

Taluk	Year
Srikakulam	1877
Narasannapeta Itchapuram, Palakonda (plain)	1889

Resettlement.

Chicacole (Srikakulam)	1909
Narasannapeta	1911
Itchapuram & Palakonda (plains)	1920-21

Srikakulam taluk:- *Original settlement.*

All the lands were classified under three main heads as Wet, Dry and Manavari. Wet lands were divided into four classes with special reference to their situation and the irrigational facilities enjoyed by them, while dry lands were actually placed in one group though two groups were sanctioned for them by the Government. The soils were divided into three sorts except in the case of regar clay for which four sorts were assigned and arenaceous heavy sand which had only two sorts. At the introduction of the settlement rates, a fourth sort was added to each series which had already three. The standard grains for wet and dry lands were second sort paddy and ragi respectively, the commutation rates adopted being Rs. 80 per garce for paddy and Rs. 105 per garce for ragi. The maximum and minimum rates of assessment were Rs. 5-8-0 and Re. 1-4-0 respectively per acre of wet land and Rs. 4 and annas 4 per acre of dry land. Manavari lands were assessed at one taram higher than similar dry lands of the village.

In resettlement, the same principles as in the original resettlements were adopted. The wet rates have been enhanced by 18¾% and dry rates by 12½% on the basis of the increase in the prices.

Original and Resettlement:—Narasannapeta, Itchapuram and plain portion of Palakona (127 *villages*)

Similar principles as in the original and resettlement of old Visakhapatam district (*viz.* for the Sarvasidhi and Golukonda taluk) were adopted with the following exceptions.

In the original settlement, the irrigation sources were divided into four classes, according to their supply capacity.

In the resettlement, there was no general reclassification of sources, except in the following areas : (*i*) The classification of the tanks in the village of Magguru in Palakonda taluk which do not receive any supply from Sekharāpalli channel taking off from the Swarnamukhi river was reduced from the first to the third or fourth class (*ii*) In four other villages, Kottisa, Talagama Sirivam and Vangara in which the supply was defective the classification of the channel and of the tanks directly fed by it, was reduced from first to the second class.

In the original settlement the rates of assessment ranged from Rs. 2 to Rs. 9-8-0 in the case of wet lands and annas 10 to Rs. 3 in the case of dry lands. In the resettlement there was an enhancement in the assessment by $18\frac{3}{4}\%$ over and above the original settlement rates.

Agency areas :—In agency villages the "Muttadari" system is still in vogue. 103 agency villages of Palakonda taluk were settled for the first time under G.O. No. 2726, Revenue, dated 9-11-1940.

12. *Estates Abolition.*—All the estates in the district have been taken over under the Estates (Abolition and Conversion into Ryotwari) Act, 1948. The survey and settlement operations are in progress.

General :—Even though the methods of cultivation are still primitive Nature is bountiful and yields generally good crops. The district, however, suffers from severe droughts once in five years. There are four salt factories in the district. Handloom weaving is an important industry in the district. The Uddanam area in Itchapuram and Sompeta is famous for coconut, jack and cashewnut gardens. In Sompeta and Baruva, coir-mats and ropes are manufactured. At Palasa, there are a number of cashewnut factories depending on the large extents of cashew topes on the sandy coast. These industries provide sufficient employment for labourers in this thickly populated district.

Money rates—Srikakulam

Tarams	Dry rates	Wet rates	Remarks
1	2.13	6 8	Scheme sanctioned in G. O. No. 2085, Revenue, dated 30th July, 1909. Rates introduced in fasli 1319 (1909-10) G.O. No. 2996, Revenue, dated 7th October, 1911.
2	2 4	5 5	
3	1 11	4 2	
4	1 6	2 15	
5	1 2	2 6	
6	0 13	1 12	
7	0 9	1 7	
8		1 4	

Money rates—Narasannapeta—Itchapuram and plain portion of Palakonda taluks

Taram	Wet rate	Dry rate	Remarks
1	9 8	3 9	Scheme sanctioned in G.O. No. 1602, Revenue, dated 8th July 1919 (B. P. No. 116, dated 10th July 1919). Rates introduced in fasli 1329 (1919-20).
2	8 5	3 0	
3	6 9	2 6	
4	5 6	1 13	
5	4 3	1 8	
6	3 0	1 3	
7	2 6	0 14	
8	2 0	0 10	
9	..	0 7	

VISAKHAPATNAM DISTRICT

Introductory :—After the formation of the Orissa State in 1936, Visakhapatnam became very unwieldy with twenty taluqs and five revenue divisions. The northern half was therefore, constituted into a new district called Srikakulam in 1950. The new Visakhapatnam district is the southern half of the old Visakhapatnam district. It lies between 17° 10′ and 18° 25′ of the northern latitude and 81° 50′ and 83° 55′ of the eastern longitude. It is bounded on the north by the Orissa State and Srikakulam district, on the east by the Bay of Bengal and on the south by the East Godavari district and on the west by the Orissa State. The district consists of the following revenue divisions comprising the taluqs noted against them.

Name of the Revenue Division	Headquarters of the Revenue Division	Name of the taluq
Narsipatnam	Narsipatnam	Narsipatnam Yellamanchili Chintapalli
Visakhapatnam	Visakhapatnam	Anakapalli Visakhapatnam Bheemunipatnam
Vizianagaram	Vizianagaram	Vizianagaram Srungavarapukota Chodawaram.

The district consists of two natural divisions namely the agency areas and the plains. The agency tract consists of the hilly regions covered by the Eastern Ghats which run parallel to the coast from the north-east to the south-west. They comprise the taluqs of Chintapalli and parts of the taluqs of Narasipatnam. Srungavarapukota and Chodawaram, portions of Vizianagaram and Visakhapatnam taluqs and the northern portions of Yellamanchili taluq also contain hills. The hills of the Eastern Ghats are of an average height of 3,000 ft. with several peaks of 4,000 ft. The chief peaks are Sinkaram 5,300 ft. and Galikonda 5,300 ft. in Srungavarapukota taluq. Between these main hills and the low country intervene ranges of lower foot hills among which there are secluded valleys. Along the coast lie a series of back-waters of the sea and swamps from which salt of a superior variety is manufactured on a large scale.

The land utilisation of the area in the district is as follows in the year 1955-1956 :—

	Acres
Total geographical area	33,14,434
Area of forests	14,46,164
Barren and uncultivable land	3,76,256
Land put to non-agricultural uses	3,67,807
Cultivable waste	73,787
Parmanent pastures	35,017
Trees, miscellaneous crops and groves	41,939
Current fallows	1,45,494
Other fallow lands	43,513
Total area sown	7,84,457
Area sown more than once.	1,98,421

The river Machkund rises in the Madugula hills in Gudem taluq and flows nearly north at first and then turns westwards into the Orissa State. There is a water fall in the river at Doduma where the Machkund Hydro-Electric Project which is a joint venture of the Orissa and Andhra States is functioning after the completion of the first stage. Three out of the six turbines have so far been installed. The rivers Champavathi and Gosthani rise in the Galikonda hills, flow through Srungavarapukota, Vizianagaram and Bheemunipatnam taluqs and fall into the sea at Konada and Bheemunipatnam. The river Sarada rises in Madugula hills flows through Chodavaram, Anakapalli and Yellamanchili taluqs and enters the sea at Vakada. The Varahanadi rises in the Golugonda hills, flows through Narasipatnam and Yellamanchili taluqs and enters the Bay of Bengal at Vakada. The other rivers flowing in gudugadda and Tandava rivers flowing in Narasipatnam and Yellamanchili taluqs. The well known Aruku valley in this district is being developed as a summer resort. There are 1,105 miles of roads in the district consisting of 132 miles of national high ways, 403 miles of major district roads, 150 miles of other districts roads, 278 miles of village roads and 142 miles of municipal roads. There are jute mills at Narsipatnam and Chithivalsa. There are 58½ miles of broadgauge section of the Southern Railway and 69 miles of the South-Eastern Railway in the district. The Vizianagaram-Raipur line now connects Visakhapatnam with Bombay by a short straight cut. Visakhapatnam is a sea-port town and its importance is augmented by the installation of the Hindustan Ship Building Yard and oil refinery. Anakapalli is noted for its jaggery industry. Simhachalam about 8 miles from Visakhapatnam is a place of pilgrimage. The deity Narasimhaswamy is venerated by all.

2. *Soils.*—The coastal taluqs included extensive sandy tracts. The prevailing rock of the district is a soft pinkish red ferrous gneiss. Intrusive bosses of granite and diorite are abundant. The soils formed by the disintegration of these rocks are highly ferruginous and often sandy. The soils in the district belong chiefly to red ferruginous series, black soils are found in the basins of the rivers. Each kind of soil gradually shades into another and so the classification is only arbitrary. Near the hills red varieties are predominant but towards the coast the soil becomes finer and in the richest valleys there is a fertile black clay with a tendency to crack on drying.

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3. *Rainfall.*—The average rainfall in the plains is 41 inches and in the agency which receives more of south-west monsoon is 57 inches. Monsoon-wise particulars are as follows:—

	Average rainfall in inches.	Average rainy days
South-West Monsoon	24.0	29
North-East Monsoon	16.6	10
Winter period	0.5	1
Hot weather period	17.3	12
Total ..	58.4	52

The average rainfall of the district during the years 1949-50 to 1955-56 is given below :

1949-50 ..	48.50 inches
1950-51 ..	35.10 inches
1951-52 ..	41.50 inches

1952-53	38.10 inches
1953-54	37.10 inches
1954-55	59.00 inches
1955-56	48.70 inches.

The normal rainfall of the district is 39 inches.

4. *Irrigation.—Chintapalli taluq.*—The region is hilly and as far as possible beds of streams are bunded up and paddy is grown. There are 81 minor irrigation sources with an ayacut of 1,554.39 acres.

Srungavarapukota taluq.—Irrigation is carried on by Gosthani river, channels and rainfed tanks. There are 1754 minor irrigation sources in the taluq with an ayacut of 55,326 acres and 54 major irrigation sources with an ayacut of 35,663.53 acres.

Chodavaram taluq.—Irrigation is by open mouth channels from the Sarada river and rainfed tanks. There are 837 minor irrigation works with an ayacut of 32,418.08 acres and 34 major irrigation sources with an ayacut of 23,865.82 acres.

Narasipatnam taluq.—The chief irrigation sources are tanks. There are 528 Minor Irrigation works with an ayacut of 15,643.18 acres and 29 major irrigation sources with an ayacut of 4,602.69 acres.

Vizianagaram taluq.—The river Champavathi has two anicuts from which about 10,000 acres are irrigated. The rest of the irrigation sources consist of rainfed tanks. There are 809 minor irrigation sources serving an area of 23,264.80 acres and 28 major irrigation sources with an ayacut of 17,185.09 acres.

Bheemunipatnam taluq.—Irrigation in the taluq is carried on by open head channels from one anicut on the river Gosthani and from open mouth channels of the Champavathi. The 63 minor irrigation rainfed sources in the taluq command an ayacut of 17,132.78 acres and 26 major irrigation sources with an ayacut of 25,405.72 acres.

Visakhapatnam taluq.—There are 173 minor irrigation works with an ayacut of 5,492.80 acres and 6 major irrigation sources with an ayacut of 1,939.52 acres.

Anakapalli taluq.—River channels and tanks from the five anicuts on the river Sarada form the principal irrigation sources. There are 546 minor irrigation sources commanding an area of 20,075.69 irrigation works and 69 major irrigation sources with an ayacut of 15,272.45 acres.

Yellamanchili taluq.—The Varahanadi, Tandava and Sarada river channels form the more important irrigation sources. There are 137 minor irrigation sources with an ayacut of 18,723.90 acres.

The Gokivadagadda, a branch of the river Sarada was embanked on the right-side from Melupaka to Marripalem to protect the ayacut under several villages from submersion.

The sources of water supply and the area irrigated there from in the district during the year 1954-55 are given below.

Source of water supply	No.	Area irrigated (acres)
1. Government canals	92	78,408
2. Private canals	8	49,585
3. Tanks	2,698	1,30,856
(*a*) With an ayacut of 100 acres or more	226	
(*b*) With an ayacut of less than 100 acres	2472	
4. Wells:		
Government (Masonry)	849	41,641
Private	15,203	
5. Other sources (Spring channels, etc.) ..	..	56,020
Area irrigated more than once ..	..	72,577
Total net irrigated	..	3,49,510
Total Gross area irrigated	..	4,22,087

5. *Cultivation.*—The agricultural year in the district can be divided into three seasons; namely '*Punasa*' the period of south-west monsoon, when the staple dry grains are sown; '*Peddapanta*' the regular wet crop season from August to December, and "*Pairu*' the period from November to April when the second dry crop is raised with the aid of North-East Monsoon. Cultivation operations of some sort or other are done for ten months out of the twelve. The 'Punasa' crops are by far the most important as they comprise, cumbu and ragi, the staple food of the mass of the people, and a failure of the south-west monsoon is a serious calamity. In several directions methods of cultivation in Visakhapatam differ from those in the South. Rice fields are often left unmanured for years together but the seedlings are given a good start by plentiful supplies of fertilizers to the seed beds. Where manures are used, the wild indigo and sunhemp plants are frequently grown and ploughed in when they are green. Dry land on the other hand, which in

the South is often neglected, is here usually plentifully manured, especially with tank silt. Ragi and cumbu (and sometimes cholam) instead of being sown, are transplanted from seed beds after rain, the seedlings being put in by hand in furrows. Paddy is the wet crop grown in the district. Dry crops such as ragi, cumbu, cholam, Groundnut, etc., are also raised in the district. The particulars of total area sown at different periods are as follows:—

Original settlement 1889	Resettlement 1919	(Present times) 1956
Acres	Acres	Acres
1,08,664	1,72,906	*7,84,457

* includes also the figures relating to estate areas taken over by the Government under the Estates Abolition Act, 1948. Original and resettlement figures do not include the cultivation figures in estate areas.

The crop calendar showing the harvesting and peak marketing seasons of some of the important crops of the district is given below :—

Products	Sowing	Harvesting	Peak marketing
Paddy	.. July-August	November-Dec.	Jan-June.
	March-April	June-July	Aug.-September
Ragi	.. June-July	Sept.-October	Nov.-December
	Jan.-February	April-May	June.
Cholam	.. September-October.	February	March-June.
Korra	.. June-July	Sept.-October	December-Jan.

6. *Cost of cultivation.*—The particulars gathered are tabulated below :

	Paddy	Ragi	Other dry grains
1	2	3	4
1. *Settlement reports.*			
(*a*) Original settlement	9-10-8 to 8-3-0	4-15-0 to 3-7-5	4-15-6 to 3-7-5

1	2	3	4
(*b*) Resettlement.	9-10-8 to 7-1-0	4-15-0 to 3-7-5	4-9-9 to 3-7-1
2. According to Agriculture officials-average.	134-1-5		
3. According to Non-officials-average	187-9-0		

7. *Prices.*—The average prices of a few important crops at different periods have been as follows :—

PER GARCE OF 3200 M.Ms.

Products	Original settlement Rs.	Resettlement Rs.	1945-46 (10 years' average)	1956-57 (10 years' average)
Paddy ..	120	197	334	809
Ragi ..	141	217	..	857-8-0

8. *Yields.*—The gross outturn of several crops gathered from important sources are given below in terms of Madras Measures.

Sources	Paddy (M.Ms.)	Ragi (M.Ms.)
Settlement Reports.		
1. Original settlement ..	400 to 900	375 to 160
2. Resettlement ..	400 to 1000	375 to 160
3. *Agriculture Department.*		
Sugar cane Research Station, Anakapalli ..	918 M. Ms.	492 M. Ms.
*4. Bureau of Economics & Statistics	601 M.Ms.	269 M.Ms.
5. Officials ..	864 M. Ms.	472 M. Ms.
†6. Non-officials ..	921 M. Ms.	649 M. Ms.

Sources : † From answers to the questionnaire.
*From statistical abstract 1955-56 on the basis of random sampling method adopted.

9. *Seasonal Conditions.*—The district has suffered but little from famines and scarcities. It experienced a serious dearth of food between November 1790 and November 1792. In April 1791, 1,200 persons were stated to have died of starvation in the neighbourhood of Vizagapatam. The failure of both the monsoons in 1823 resulted in nearly half the wet land being left uncultivated and in the dry land crops suffered greatly, so that early in 1824 the price of grain was double the normal. The effects of the Orissa famine in 1865-66 were felt somewhat in Vizagapatam. North-east monsoon of 1868 failed and some anxiety prevailed until the south-west rains of 1869 proved to be favourable. In 1871 distress threatened the district. The great famine of 1876-78 which wrought such terrible havoc in the south of the State was hardly felt in Visakhapatnam. The season of 1885-86 was especially unfavourable. Yet in 1889, the year of the Ganjam famine Visakhapatnam escaped entirely. In 1891-1892 there was again considerable scarcity of food. In 1896-1897 occurred the last famine which the district had witnessed until 1943 when famine conditions prevailed. The district has experienced more than its share of floods and storms on account of the long coast and due to the short courses of the several rivers which rise from the Eastern Ghats which are at a distance of 20 to 30 miles from the coast, the district is frequently a victim to cyclones, floods and tidal waves.

Earthquakes have been reported as having occurred in the district on the 6th January 1827, 24th August 1859, 19th December 1870, and 31st December 1881, but none of them did any damage.

The particulars of remissions granted during the past five years are as follows :—

Statement showing the particulars of remissions granted during the past five years (1362-1366 F.)

1362 F.	1363 F.	1364 F.	1365 F.	1366 F.
Rs.	Rs.	Rs.	Rs.	Rs.
66,880	19,230	43,746	19,981	12,431

10. *Holdings.*—The number of land holdings in the district is 29,835 and the area owned by them is 1,62,872 acres. Out of the total number of holdings 20,196 are holdings paying an assessment of Rs. 10 and less. Thus it is evident that this is a district of small holdings. The latest particulars are as follows :—

[*Statement.*

Classification of holdings		Single pattas			
		No. of pattas.	Extent of holdings.		Assessment in Rs.
			Dry	Wet	
(1)		(2)	(3)	(4)	(5)
			Acs.	Acs.	
1.	Rupee one & less	1,310	903	105	979
2.	Rs. 10 & less but over Rs. 1 ..	5,592	18,120	2,258	19,553
3.	Rs. 30 & less but over Rs. 10 ..	1,797	9,766	3,438	31,152
4.	Rs. 50 & less but over Rs. 30 ..	556	3,820	1,945	12,105
5.	Rs. 100 & less but over Rs. 50 ..	210	3,379	1,823	14,505
6.	Rs. 250 & less but over Rs. 100 ..	69	3,112	1,591	10,601
7.	Rs. 500 & less but over Rs. 250 ..	14	670	409	3,373
8.	Rs. 1,000 & less but over Rs. 500 ..	2	240	271	1,015
9.	Rupees over 1,000	..	..	..	..
	Total ..	9,550	39,810	11,840	93,283

Continuation of the Statement above.

Joint pattas				
No. of pattas	No. of share holders	Dry	Wet	Assessment in Rs.
(6)	(7)	(8)	(9)	(10)
1,309	2,000	1,183	173	1,802
11,985	16,001	23,350	3,105	42,633
4,112	10,941	26,959	7,538	68,929
1,496	4,516	12,305	5,549	60,009
1,017	3,533	9,159	8,056	50,041
336	1,336	4,895	5,865	41,568
29	233	1,827	1,085	8,881
1	26	29	144	523
..	..	..	..	..
20,285	38,586	79,707	31,515	2,74,386

11. *Features of Original Settlement* : (1889).—By Mr. C. J. Stuart & M.E. Rangachari. (The Government taluqs of Palakonda now in Srikakulam district (Sarvasidhi & Golugonda).

The original settlement was done in 1889.—(*a*) The soils were classified into two main series regar and red ferruginous. The red ferruginous series were subdivided into clayey and loamy. Each of these subdivisions was again subdivided into five sorts, best, good, ordinary, inferior and worst. (*b*) Irrigation sources were divided into four classes according to their supply. (*c*) For the purpose of dry assessment, villages were divided into two groups with reference to facilities of communications, accessibility to ports and markets, unhealthiness and exposure to the ravages of wild animals. (*d*) Paddy was adopted as the standard crop for wet lands in all the taluks and cumbu and ragi in the proportion of 2 to 1 in the taluqs of Yellamanchili and Narasapatam. (*e*) Commutation rates were fixed after allowing a deduction of 15% on account of the difference between market prices and the ryots' selling prices. The rates thus adopted were Rs. 105 a garce of 3200 M. Ms. for paddy and Rs. 126 a garce for ragi and Rs. 114 a garce for cumbu. (*f*) The rates of assessment ranged from Rs. 6 to Rs. 8 in the case of wet lands. (*g*) A consolidated charge was imposed on all wet lands irrespective of the No. of crops grown on them, the addition made to the single crop assessment on this account being one-third, one-fourth, one-fifth, and one-sixth respectively under the first, second, third and fourth class sources.

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12. *Features of Resettlement.* (1919-20).—(By Mr. J. T. Gwyn I.C.S.). The Government taluqs of Palakonda now in Srikakulam district, Sarvasidhi and Golugonda taluks.

There was no general reclassification of soils except in respect of the lands commanded by the new Nagavali anicut. As regards the remaining area classification was altered in the case of the following lands :—

(1) Lands which were found to have been seriously over assessed at settlement, especially in the (Sarvasidhi) Ela manchili taluq.

(2) Lands which were unassessed at the original settlement but which were subsequently transferred to assessed waste or assigned on patta by the Revenue Department.

(3) Lands which had been transferred from dry to wet or vice versa or from one source of irrigation to another subsequent to the original settlement.

(4) Lands in the seven villages of Narasipatnam (Golugonda) taluq which were irrigated by the channels from the Komaravolu Ava and the small anicuts on the eastern branch of Varahanadi and the tanks directly supplied by them.

(5) At the original settlement the whole of Elamanchili (Sarvasidhi) taluq and 99 villages of Palakonda (now in Srikakulam district) were placed in the first group, the whole of Golugonda (Narasipatam) and the remaining 28 villages in Palakonda being placed in the second group. No changes were effected in dry grouping at the time of resettlement.

(6) There was no general reclassification of irrigation sources except in the case of channels from the Komaravolu Ava and the small anicuts on the eastern branch of the Varahanadi and the tanks directly supplied by them was raised from the second to the first-class.

(7) Commutation rates : Paddy was adopted as the standard crop for wet lands at the original settlement. As regards dry lands, ragi was adopted as standard crop in Palakonda (now in Srikakulam district) while cumbu and ragi were adopted as the standard crops in the taluqs of Elamanchili (Sarvasidhi) and Narasipatam (Golugonda). After deducting 15% on account of cartage and the merchants' profits, the commutation rates were fixed at Rs. 105 a garce for paddy, Rs. 126 a garce for ragi and Rs. 114 a garce for cumbu. The commutation prices of these three grains based on the average annual prices during the 20 non-famine years ending with 1916-17 amount to Rs. 220 a garce for paddy, Rs. 247 a garce for ragi and Rs. 226 a garce for cumbu. These prices were somewhat higher than those prevailing in the ryots' selling months during the same period which amount to Rs. 214 a garce for paddy, Rs. 238 a garce for ragi and Rs. 221 a garce for cumbu. After deducting 15% from the latter set of prices on account of cartage and merchants' profits, the net commutation rates amounted to Rs. 182 for paddy, Rs. 202 for ragi and Rs. 188 for cumbu which represent an increase of 73%, 60% and 65% respectively on the commutation rates adopted at the original settlement. If however, the year 1917-18 is taken as the terminal year of the twenty years' period the net commutation rates would come to Rs. 186 a garce for paddy, Rs. 206 a garce for ragi and Rs. 192 a garce for cumbu. An enhancement of the assessment by 18¾ percent of the original settlement rates was therefore ordered.

(8) Charge for second crop : At the original settlement, the wet assessment in the three Government taluqs was a consolidated one irrespective of the number of crops grown. The addition made to single crop assessment on this account was one-third, one-

fourth, one-fifth and one-sixth respectively on lands under first, second, third and the fourth class sources. As these rates were less than normal rates namely half, one-third, one-fourth, and one-fifth, no remission was granted when a second crop was not grown. The Government discontinued the system of levying a consolidated assessment on wet lands. Lands which in all ordinary seasons had an unfailing supply of water were registered as double crop and such lands were eligible for remission of the difference between the double and single crop charges if the water supply was found insufficient for two crops in any year. A second crop when raised on land regsitered as single crop wet will be charged in accordance with paragraphs I (*i*) and 2 of B.S.O. 5. Lands on which two wet crops or one wet and one irrigated dry crop were grown were registered as compounded double crop lands at the following standard rates. Lands under second class source at 1 & 1/3 of the single crop charges. Lands under third class source at 1 & 1/4 of the single crop charges. Lands under fourth class source at 1 & 1/5 of the single crop charges. Lands under fifth class source at 1 & 1/6 of the single crop charges. The usual increment remission was given.

13. *Settlement of resumed muttas in Gudem taluq in* 1936. 76 villages of Koyyur, Antada, Mokaam and Chintampadu resumed muttas were settled as per G.O. 2051, dated 30-8-1935 and G.O. 1324, dated 19-6-1936. The rates sanctioned are as follows:-

Money Rates—Visakhapatnam—Gudem (*Resumed Muttas*)

Class and sort of soil					Wet rates		
III	IV	V	VII	VIII	III class	IV class	V class
					Rs.	Rs.	Rs.
..	1	..	..	..	8 5 0	6 9 0	5 6 0
1	2	..	1	..	6 9 0	5 6 0	4 3 0
2	3	1	2	1	5 6 0	4 3 0	3 0 0
3	4	2	3	2	4 3 0	3 0 0	2 6 0
4	5	3	4	3	3 0 0	2 6 0	2 0 0
5	..	4	5	4	2 6 0	2 0 0	2 0 0
..	..	5		5	2 0 0	2 0 0	2 0 0

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Class & sort of soil					Dry rates.		
III	IV	V	VII	VIII	III class	IV class	V class
					Rs.	Rs.	Rs.
1	..	..	..	..	3 0 0	2 6 0	1 13 0
2	1	..	1	..	2 6 0	1 13 0	1 8 0
3	2	..	2	..	1 13 0	1 8 0	1 3 0
4	3	1	3	1	1 8 0	1 3 0	0 14 0
5	4	2	4	2	1 3 0	0 14 0	0 10 0
..	5	3	5	3	1 14 0	0 10 0	0 7 0
..	..	4	..	4	0 10 0	0 7 0	0 5 0
..	..	5	..	5	0 7 0	0 5 0	0 3 0

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Tarm	Wet rates	Dry rates
	Rs.	Rs.
1	8 5 0	3 0 0
2	6 9 0	2 6 0
3	5 6 0	1 13 0
4	4 3 0	1 8 0
5	3 0 0	1 3 0
6	2 6 0	0 14 0
7	2 0 0	0 10 0
8	..	0 7 0
9	..	0 5 0
10	..	0 3 0

A comparative statement showing the money rates of the original and resettlements for the Government taluqs is given below:–

No. of tarams	Wet		Dry	
	Original settlement 1889	Re-settlement 1919	Original settlement 1889	Resettlement 1949
1	8 0 0	9 8 0	3 0 0	3 9 0
2	7 0 0	8 5 0	2 8 0	3 0 0
3	5 8 0	6 9 0	2 0 0	2 6 0
4	4 8 0	5 6 0	1 8 0	1 13 0
5	3 8 0	4 3 0	1 4 0	1 8 0
6	2 8 0	3 0 0	1 0 0	1 3 0
7	2 0 0	2 6 0	0 12 0	0 14 0
8	..	2 0 0	0 8 0	0 10 0
9	..	..	0 6 0	0 7 0

14. *Estates Abolition.*—All the estates in the district have been taken over under the Madras Estates (Abolition and Conversion into Ryotwari) Act, 1948. Survey and settlement operations on the same lines of resettlement principles have been completed and settlement rates have been introduced on 1-7-58 in the taluks of Vizianagaram, Srungavarapukota and Bheemunipatnam. In respect of other areas they are in progress. Practically 3/4 of the district was covered by zamindaries out of which the notable are Vizianagaram, Madgole, Chemudu and Kasimkota. It may also be mentioned that the rents in Vizianagaram zamindari were quite moderate and the irrigation sources were maintained in a fairly satisfactory condition.

WEST GODAVARI DISTRICT

Introductory

In April 1925 the taluks forming the Godavari Western delta together with the adjacent uplands were separated from the old Krishna district and formed into the new district of West Godavari. The agency taluk of Polavaram was also transferred to this district from East Godavari in 1942. The western delta of the river Godavari lies in this district which has been appropriately named

"West Godavari". The district consists of eight taluks in three revenue divisions as detailed below :—

Name of the Revenue Division	*Name of the Taluk*
Eluru	Eluru Chintalapudi
	Tadepalligudem
Kovvur	Kovvur Polavaram Tanuku
Narsapur	Narasapur Bhimavaram

The district lies between 16° 15′ and 17° 30′ of the northern latitude and 80° 50′ and 81° 55′ of the eastern longitude. The district is bounded by the Krishna district on the west and Khammammet district on the north, East Godavari on the east and Bay of Bengal on the south. It is a small district in the State with an area of 2,988 sq. miles and a population of 1,697,727. The density of population is 568 per sq. mile. The land utilisation of the area is as follows :—

	Acs.
Total Geographical area	19,31,830
Forests	1,81,471
Barren and uncultivable land	2,19,915
Land put to non-agricultural use	1,63,881
Cultivable waste	2,28,834
Permanent pastures	67,906
Miscellaneous trees, crops, etc., not included in net area sown.	7,586
Current fallows	1,03,111
Fallow land other than current fallows	65,486
Net area sown	9,56,640
Area sown more than once	2,08,226

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The most striking physical features of the district from the point of view of Revenue settlement is that half of it is delta and the remaining half is upland and agency. The agency taluk Polavaram is hilly and inhabited mostly by Adi-vasis. The upland area consists of the Chintalapudi taluk, the northern portion of Eluru, Tadepalligudem and Kovuru taluks. The delta area is irrigated by the Godavari river channels and Krishna channels. The river Godavari flows along the entire eastern boundary of the district. The Tammileru river flows along the western boundary of Eluru and Chintalapudi taluk. Lake Collair is an extensive shallow depression which receives a large volume of drainage from the Godavari and Krishna canal systems and has an outlet to the sea through Upputeru river. The lands on the margin of the lake suffer immersion as the entire inflow cannot be adequately drained away into the sea by Upputeru. The upland and the delta however show a striking contrast. The dividing line runs from Bezwada along the Eluru Canal to the Godavari anicut. South of this lies the delta, with alluvial soil and under wet cultivation, presenting a vast expanse of paddy fields. North of Bezwada-Samalkot line lies the upland of the district. There are 1,172 miles of road and 108 miles of broad gauge and 14 miles of metre gauge railway in this district. The laying of Nidadavoulu-Narasapur broad gauge line and the Gudivada-Bhimavaram metre gauge line has improved communications and opened up the delta for trade in other states. Besides these railways the net work of Godavari canals afford cheap transport facilities for agricultural produce and passengers.

2. *Soils.*—There are three classes of soils in the district *viz.,* alluvial, black clay and red ferruginous. There is also a small belt of arenaceous soil on the sea coast.

The district is a very fertile one and alluvial soil occurs extensively in all the taluks except Chintalapudi and Polavaram.

3. *Rainfall.*—For this purpose the year may be divided into the following 4 seasons and the seasonwise rainfall for 1955-56 is furnished.

South-West Monsoon	North-East Monsoon	Winter period	Hot weather	Total rainfall
June to September 1955	October to December 1955	January to February 1956	March to May 1956	June to May 1956
27.2 inches	14.1 inch.	0.1 inch.	5.1 inch	46.5 inch

Normal Rainfall, 40.7″.

Most of the rainfall is received during the South-West Monsoon from June to September and a little rainfall during the North-East

Monsoon in October and November. The climate is generally healthy throughout the district. The hilly areas of Polavaram taluk are slightly cooler than the plains in the months of December and January.

The effect of local rain depends more on its distribution than its total quantity and a year of heavy downpour may be as disastrous as one of comparative drought. As far as the delta is concerned local rains are of secondary importance to the supply in the river. It is, however, in the uplands that the effects of insufficient rains are most keenly felt. This district rarely experienced famine or scarcity conditions after the advent of the Godavari anicut system.

4. *Irrigation.*—Irrigation is carried on mainly from the canals of the Godavari and Krishna deltas. This district usually suffers from inadequate drainage and submersion. In the uplands the irrigation sources consist mostly of rainfed tanks and a few tanks fed by natural streams. Sometimes direct irrigation by baling from the streams is also resorted to by the ryots. There are private wells in the uplands for irrigating garden crops. Temporary doruvu wells irrigate dry crops in the coastal villages. There are about 1,295 irrigation pumps out of which 1,079 are worked by Oil Engines and 216 with Electric power in the district. The sources of water supply and the area irrigated therefrom in the district in 1955-56 are given below:—

Sources of supply	No.	Area irrigated in Acs.
Government Canals	169	6,18,459
Tanks	445	1,13,966
Wells	1,401	10,251
Other sources		14,147
		7,56,823
Area irrigated more than once		57,911
		8,14,734

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5. *Cultivation.*—Out of 8,14,734 acres of the total irrigated arae, an extent of Ac. 7,61,394 is utilised for cultivation of food

crops. Paddy is grown in an extent of Ac. 7,27,375. The particulars of total area cultivated at different periods are shown below :—

First Resettlement (Approximate)	During 1919-23 Second Resettlement	During 1955-56 (Present times)
4,60,605	6,41,590	8,14,734

The crop calendar showing the sowing, harvesting and peak marketing seasons of some of the important crops of the district is given below :

Products	Sowing	Harvesting	Peak marketing
Paddy ..	June-August Jan.-February	Sept.-October April-May	June-July
Jowar ..	Sept.-October	January	March-June
Sugarcane ..	March-April	Feb.-April	April- June
Onions ..	July-October	Dec.-March	January-June
Tobacco ..	October	February	April-June
Gingelly ..	June-July	Sept.-October	Nov.-December
Chillies ..	September	March	April-June
Red-gram ..	July-August	Jan.-February	March-April

6. Costs of cultivation— The particulars gathered are tabulated below :—

Source and Year	White paddy	Black paddy	Cholam	Sajja	Ragi
1. Settlement scheme reports of original and resettlements (1860-1930) ..	3 8 0 to 14 0 0	2 12 0 to 4 0 0	2 0 0 to 4 12 0	2 0 0 to 4 0 0	2 12 0 to 4 4 0
2. Collector (1958) ..	100 0 0	40 0 0	40 0 0	..	..
3. Agricultural Officers gathered from questionnaires.	151 0 0	..	111 0 0	..	..
4. Director of Agriculture for seed farms.	204 0 0	..	81 0 0	..	149 0 0

Source and Year	Horse-gram	Tobacco	Sugar-cane	Others
1. Settlement Scheme reports of original and resettlements (1860-1930)	2 12 0 to 4 4 0	35 0 0 (1860)	95 0 0 (1860)	For Alluvial soils Rs. 8 to Rs. 14 from the first resettlements.
2. Collector (1958)	..	..	600 0 0	
3. Agricultural Officers gathered from questionnaires.	35 0 0	480 0 0	846 0 0	
4. Director of Agriculture for seed farms	..	..		..

7. The average prices of a few important crops, at different periods are furnished below:—

PER GARCE OF 3200 MADRAS MEASURES

Products	1860 Original Settlement	1899 First Resettlement	1931 Second Resettlement	1945-46 (10 years' average)	1956-57 (10 years' average)
Paddy ..	88	136	293	331	894
Cholam ..	101	169	345	..	..

8. *The yields.*—The gross outturns of several crops gathered from important sources are :—

Source	Paddy	Cholam	Sajja	Ragi
Settlement ..	500 to 1,150 M.Ms.	50 to 800 M.Ms.	66 to 666 M.Ms.	100 to 933 M.Ms.
Present Day :				
Bureau of Economics	713 M.Ms.	120 M.Ms.	171 M.Ms.	240 M.Ms.

based on random sampling method		
Agricultural Officers	984 M.Ms.	303 M.Ms.
Officials	939 M.Ms.	305 M.Ms.
Non-Officials	972 M.Ms.	458 M.Ms.

9. *Seasonal conditions.*—The years of seasonal calamities are the following :—

Floods : 1614
Famine : 1791
Guntur Famine : 1832-33
Distress due to failure of monsoon : 1835-38
Disastrous cyclone, inundation and famine : 1839-41
Floods : 1862, 1863, 1875, 1878, 1882 to 1884
Severe floods : 1886, 1900 and 1953
Floods : 1928
Storm : 1937
Cyclone : 1945, 1949

A statement showing the particulars of remissions granted during the past five faslis is given below :—

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	Rs.
Fasli 1362	1,62,540
Fasli 1363	56,888
Fasli 1364	83,601
Fasli 1365	2,92,579
Fasli 1366	1,82,415

10. *Holdings.*—The number of land holdings in the district is 1,66 630 and the area covered by them is 7,65,813 acres. The number of pattadars assessed over Rs. 1,000 are seventeen, with an extent of acres 10,216 bearing an assessment of Rs. 49,131. The total assessment covered by the holdings is Rs. 28,32,638. A statement showing the details of holdings is appended below. The district is evidently a district of small holdings.

[*Statement*

Holdings assessed to	Number			Extent	Assessment
	Single	Joint	Total	Acres	Rs.
Re. 1 and less	15,819	10,292	26,111	24,962	20,380
Rs. 10 and less but over Re.1	45,657	32,271	77,928	2,15,151	5,31,228
Rs. 30 ,, Rs. 10	19,315	20,969	40,284	2,11,625	7,95,876
Rs. 50 ,, Rs. 30	5,760	6,102	11,862	1,16,491	4,55,268
Rs. 100 ,, Rs. 50	3,780	3,417	7,197	90,653	4,23,798
Rs. 250 ,, Rs. 100	1,504	1,149	2,653	62,843	3,27,308
Rs. 500 ,, Rs. 250	203	277	480	23,566	1,61,297
Rs. 1,000 ,, Rs. 500	49	49	98	10,306	68,252
Over Rs. 1,000	6	11	17	10,216	49,131
Total	92,093	74,537	1,66,630	7,65,813	28,32,638

Features of the Original Settlement about 1860

(BY R.E. MASTER)

11. (*a*) Settlement operations were taken up about 1860. The present West Godavari then formed part of the Godávari district which was divided into delta and uplands. Delta portion was again divided into Western, Central and Eastern delta. The western delta corresponds to the present delta portion of the West Godavari. Separate rates of assessment were sanctioned to the delta and uplands. All the lands in the delta were classified as dry and a uniform water rate was levied on the irrigated lands in addition to the land assessment. However the lands irrigated in upland from a Government source of irrigation were classified as consolidated wet lands and separate wet rates were charged. (*b*) The soils in the delta were divided into five classes—alluvial, exceptional or permanently improved, regar, red ferruginous and arenaceous, while those in the uplands were divided into four classes—alluvial, permanently improved, regar and red ferruginous. The regar and the red-ferruginous series were subdivided into clay, loam and sand, and the arenaceous into loam, sand, and heavy sand. Each of these subdivisions was further subdivided into sorts—generally three. Lands classified as alluvial or as permanently improved were also similarly subdivided into sorts. (*c*) The villages were divided into four

dry groups based on the relative fertility of the soils in each village and not in consideration of its proximity for markets and facilities of markets and for each group a separate set of dry rates was framed.

2. The water rate for Godavari delta was fixed at Rs. 3 an acre in 1861. It was raised to Rs. 4 in 1865 in G.O. 1006, dated 12-5-1865. This was again raised to Rs. 5 per acre in G.O. No. 562, Revenue, dated 2-8-1894. Since 1931, the rate has been increased to Rs. 6-4-0 per acre. The standard grains adopted were white paddy for wet and cholam, cumbu, ragi, blackpaddy and horsegram for dry. The rates were calculated from the commuted value of the standard outturns less 25 per cent for vicissitudes of seasons and the estimated cultivation expenses.

12. (a) Features of First Resettlement

(BY MR. G. P. CLERK)

The original settlement in the western delta expired by 1892-93 and in the rest of the tract by 1896-97. The delta portion was reclassified substituting consolidated wet assessments for the existing separate charges of land assessment and water rate.

Delta soils were reclassified on a more elastic table providing five sorts for each class except arenaceous series. A special sort I, 1-A was adopted in the delta to provide for the exceptionally fertile alluvial clay found both in dry and wet areas near the Godavari river. Lankas and Padugais were also classified on their merits and rates one and two tarams higher than the rates on ordinary lands of the same classification were charged on padugais and lankas respectively. Two dry groupings were adopted.

Classification of sources.—

Four classes for irrigation sources were adopted. To allow for irrigational defects of particular blocks, the channel in the same village can be, the first, second and third class for the different portions of the ayacut.

The standard grains adopted were, white paddy for wet and black paddy for dry land.

Upland soils were not reclassified. The old rates of assessments were enhanced by $33\frac{1}{3}$ per cent.

Water Rate :

This remained at Rs. 5 per acre till 1931 when it was raised to Rs. 6-4-0 per acre.

REPORT

OF THE

LAND REVENUE REFORMS COMMITTEE

PART I—Volume (ii)

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CHAPTER IV

Principles and methods of Settlement in the Telangana region

After the assumption to the office of Prime Minister by Sir Salar Jung, the State undertook to deal directly with the cultivators, discontinuing the practice of assessing villages in the gross, and a method of assessing the land held by each individual cultivator was introduced as the ryotwari system of periodical settlement was considered as the best. Bombay and Madras States have also followed the same system. These beneficient reforms led to a security of tenure of the cultivator and the area under occupation steadily increased. But there were still certain drawbacks. The fields had not been accurately measured ; the soils had not been classed according to their relative values and, as a natural consequence, it followed that the assessments were very unequally distributed on the different holdings.

In order to set right these drawbacks several revenue officers urged upon the Government, the need for fixing proper assessment on land. The Government tried the experiment of having some areas surveyed by patwaries. This experiment made matters worse. Government, therefore, decided to introduce a regular survey and settlement in the State in 1875. These survey operations, on a small scale, were commenced in Paithan taluka of Aurangabad district. The results were encouraging and Government extended survey operations to other places. The definition and demarcation of fields, the settlement of boundary disputes, classification of soil, the interior regulation of survey and the administration of the settlement were regulated by the main principles, laid down by Messrs. Gold-smid and Wingate in their joint report. In this system a field is the unit of survey, as the success of settlement under the ryotwari system, depends entirely on the correct measurement of fields and on the facilities afforded for identifying them.

The survey number is subdivided into Pot-numbers or sub-divisions, if it consists of holdings belonging to different persons. According to the rules, sub-divisions of less than 8 acres in the case of dry land and of less than 1 acre in the case of wet lands are not recognised for purposes of survey.

For purposes of settlement, the taluk is considered a convenient unit. When a taluk is taken up for settlement, the fields of all the villages of the taluk are cadastrally surveyed and their relative values (*i.e.*, the classification of soils, the command of water for irrigation, or other extrinsic circumstances) are determined.. The method of soil classification is generally the same as that followed in Bombay with slight modification to suit local conditions.

There are three important factors in regard to the soil classification. They are the *colour*, *depth* and *texture* of soils. In regard to the question of depth, the factor determining the fertility of a particular soil is dependent on the usual depth to which roots of plants reach in a cultivation season and also the depth up to which the retention of moisture due to rains or watering will facilitate growth of particular crops.

In the case of regar or black soils, the relative value is determined according to their depths and in the case of chalka soil and wet, garden lands according to the relative proportions of clay and sand in them. In the case of wet and garden lands in addition to the soil value of the land, the classification of the source of irrigation is an important factor governing the determination of the assessment. There is an annawari table according to which the water class of source of irrigation is fixed and it is taken into account in fixing the assessment of wet lands. Other factors also such as distance from the village site or from the source of particular irrigation are taken into account in determining the valuation.

There are 7 classes in the soil classification in Telangana as against 9 found in Bombay and Mysore which follow the description and distinction given by the authors of the joint report.

In regard to wet and Bhagat lands the first class lands have only 4 classes, *viz.*, 1, 2, 3 and 4 ranging from 16 annas to 11 annas, 16 annas for the first class, 15 for the second class, 14 for the third class and 11 for the fourth class. The second class soils in respect of wet and garden lands have only 4 classes of lands under them *viz.*, from 2, 3, 4 and 5 with the soil value ranging downwards from 15 to 8 annas, 15 annas, 14 annas, 11 annas, and 8 annas, respectively.

In respect of dry chalka soils, the classification of dry lands is as noted below :

In the first class, the classes range from 3 to 7 *viz.*, 14 annas, 11 annas, 8 annas, 5 annas, and 3 annas, respectively, and in regard to the 2nd class of lands, the ranging is from classes 4 to 7 *viz.*, 11 annas, 8 annas, 5 annas and 3 annas. The 3rd class of land in dry chalka soils has only one classification *viz.*, the 7th or last with the soil value of 3 annas.

In Black Cotton soils, the classification is based on the depth of the soil which determines its fertility. In these lands the 1st group consists of different classes which range from 1 to 7, with values from 16 annas down to 3 annas, respectively and in the 2nd class of land, the soil classes range from the 2nd to the 7th with values of soils of 15 annas, 14 annas, 11 annas, 8 annas, 5 annas and 3 annas respectively. The table shows the various classes of soils, the depths and the soil values of various classes of lands :

	In Black Cotton soils according to depth of soils in cubits.		In Eastern Districts with reference to proportion of clay to sand.				
			Dry lands proportions of clay		Wet lands proportions of clay		
Soil class	Black soils	Red soils	Black soils	Red soils	Black soils	Red soils	Comparative soil value assigned in annas.
1.	1¾ cubits or more	..	..	..	¾ or more	..	16
2.	1½ cubits or more	1¾ cubits & more	..	..	½ or more	¾ or more	15
3.	1¼ ,,	1½ ,,	¾ or more	..	¼ ,,	½ ,,	14
4.	1 ,,	1¼ ,,	½ ,,	¾ or more.	Less than ¼	¼ ,,	11
5.	¾ ,,	1 ,,	¼ ,,	½ ,,	..	Less than ¼	8
6.	½ ,,	¾ ,,	Less than ¼	¼ ,,	..	..	5
7.	¼ ,,	½ ,,	..	Less than ¼	..	..	3

The lands up to 8 annas value are considered as superior and the rest as inferior. The value is determined on the basis of depth or proportion of clay and sand. It is reduced if some defects injurious to crop are found in the soil. These defects or 'Dosh' as they are called are 8 in number. They are shown with their conventional marks below :

1. Chunkhad ∴ Denotes a mixture of minute fragments or nodules of limestone.

2. Walsar .. V ,, a mixture of sand.

3.	Utarvat ..	⁄	Denotes a sloping surface.
4.	Reswath ..	×	„ want of cohesion amongst the constituent particles of the soil.
5.	Karal ..	∧	„ a peculiar mixture, more or less impervious to water.
6.	Dhopan ..	ȝ	„ liability to be swept over by running water.
7.	Upalwat ..	□	„ liability to an excess of moisture from surface springs.
8.	Gochu ..	L	„ a mixture of large fragments or nodules of limestone.

It is presumed that these defects have a deteriorating influence on crop. Therefore, for each defect found in the soil one annawari class is reduced and the value determined. Out of these defects, some are not considered injurious to wet and garden crops ; therefore they are not taken into account. Similarly " Reswath " and " Walsar " (small and big particles of sand) are not considered harmful to crops grown in chalka soil. The classification of chalka, therefore, is fixed two grades lower than wet land taken into account the existance of these two defects as natural in that soil. The following defects are to be neglected in respect of the following kinds of land :

1. For Chalka soils:–Walsar and Reswath;
2. Wet lands:–Reswath, Upalwat and Dhopan;
3. For garden lands:–Reswath, Walsar and Karal (Saline or Alkaline).

One field may not be of the same type throughout. Therefore, for classification purposes, it is divided into several compartments (Khastas), on the basis of the area according to the following scale:-

	No. of Khastas or Compartments.
Up to one acre	2
From 1 to 3 acres	3
„ 3 to 5 acres	4
„ 5 to 10 acres	6
„ 10 to 20 acres	8
„ 20 to 30 acres	10
For every 3 acres above 30 acres	1 more Khasta.

This system of having Khastas or compartments is intended to ascertain from the representative blocks, where the soil is tested, to fix a correct annawari value for the whole survey number. In choosing a place where the texture and depths are to be examined by excavation or boring a hole, care should be taken to see that they are not on the edge of a field but are in the middle of each compartment or some such representative place in a compartment. Examining a place which is well manured or in a soft place, though the conditions in the other parts in that compartment are different, will give results which will be unfair to the holder of the lands. Similarly, selecting a patently arid or stony high level spot for examination, overlooking the fact that the major portion of such a field is of a superior kind, would be unfair to the Government.

Each compartment is classified separately and average annawari worked out by dividing the sum-total of the annas, by the number of compartments. This is taken as the classification of the survey numbers in terms of annas.

An allowance in annawari called, 'mile-war' is also made for all classes of lands for distance from the village-site. For every half-mile distance beyond the first 1/8 mile from the village, half anna value of the field is reduced up to a maximum of four annas.

For dry lands, fertility of soil is an important factor, in determining the yield. Consequently, in fixing the assessment of dry fields, soil classification is the most important factor. The nature of soil, whether it is of black-cotton type or red-chalka type, and in the former case, the depth of morum layer from the surface, and in the latter case the proportion of sand to clay, are first ascertained and noted as different classes in term of annas in a rupee, and later the acknowledged defects (*e.g.*, the presence of lime particles, etc.) which reduce the yield, are taken into account.

In the case of wet or irrigated lands, water is also an equally important factor. Therefore, in addition to the classification of soil, taking into account the nature of water supply, the water available for irrigation is also classified, which is called 'Pani' or water classification.

Water classification in the erstwhile Hyderabad State was based on the nature of the source of irrigation with reference to the quantity of regular water supply available for irrigation. There are two broad divisions of sources.

1. 'Patasthal' sources or sources which can supply water by natural gravitational flow.

2. 'Motasthal' sources where only lift irrigation is possible.

Sources under the first category where the ayacut or the extent of lands irrigated (tank or other sources of irrigation) is 30 acres or more than 30 acres, and which supply water for Tabi crop, are considered the best and, therefore, the water classification under such sources would be first class (1 anna). Where the ayacut is less than 30 acres, land under such sources are classified as falling under the second class with the water class fixed at 2 annas.

Irrigation by means of spring is also given the first class water class 1 anna, while if it is under a 'Jharra' which is not of the same capacity, as a spring, it is given the second class—2 annas.

If irrigation is by means of a river, the water classification would be 1 anna (first class) while if it is from a nala it would be 2 annas (second class).

If the water is saltish and hence less useful, the water classification is reduced by one anna. If the water passes over saline soil, or karal land or land mixed with limestone particles, the water classification be further reduced by half anna. A table showing the variation in assessment for different soils under different water classes is given in Appendix. V.

The water classification for Baghats or Garden is determined by the period for which the water is utilized by flow and not by lift. If the flow is available for a period of 8 months, the water classification is one anna and for every month for which the flow is less, the water classification will be reduced at the rate of 6 pies for every month which is less. Thus if the flow is only for 4 months instead of 8, the water classification will be 3 annas. If the water is available only for one month, the water classification is put at 5 annas, because the use of water for one month will not confer much advantage for cultivation and as such the reduction is more. In respect of wells sunk in the bed of tanks from which the water is used during times of scarcity, such water is regarded as a flow irrigation.

In cases where, ordinarily, the source is a small one, if 2 crops are raised, the water classification will be regarded as 2 annas for the Abi crop and one anna for the Tabi crop. Where water is used for Tabi, whatever the size of the source, the source is regarded as a tank and not as a kunta.

In the case of lift-irrigation, water classification depends upon the height to which water is to be lifted for irrigating the land. If water is to be lifted to only a small height by manual labour water classification will be of 2½ annas class. Where water is to be lifted by mhots or otherwise, to a greater height the water classification will be as given below :—

Height to which water is to be lifted	Pani or water class of the source
1 to 6 yards	3 annas.
6 to 8 „	3½ „
8 to 10 „	4 „
10 to 12 „	4½ „
More than 12 yards	5 „

Further if water from the wells is to flow for a longer distance than 10 chains water classification is further reduced at the rate of half anna per 20 chains.

As per the subsequent Government orders all lands under lift irrigation are to be assessed at the dry rates, therefore the question of water classification for lands under lift irrigation does not arise now.

It may be noted that in no case can the water classification be reduced to more than 5 annas.

In Telangana, wet cultivation is compulsory under any source specified by the Settlement Department and a consolidated wet assessment is charged. Although, wet cultivation is compulsory, and liable to be charged a consolidated wet rate, suspensions and remissions in land revenue are also allowed in case of failure of crops.

If two crops are grown in a wet land, annually, the first crop is called "Abi" for which full assessment is charged and the second crop is called "Tabi" for which only half of the wet assessment is levied. The rain-fed lands known as "Asmani Tari" (or Manavari) lands though classified as wet are only charged dry assessments.

The classification details are entered in a separate register called "Parthi Book". If any portion of a survey field is found to be uncultivable, it is not classified and no assessment is levied on this area. It is treated as "Pot-Kharab". The Pot-Kharab includes all topo-details, *viz.*, paths, the land with toddy and Gulmoha trees, field channels, nalas and other uncultivable portions which are net surveyed separately during survey process. In all wet lands, in addition to this, two guntas (or 5 cents) per acre are allowed as Pot-Kharab for ridges. The rate of assessment is worked out by taking into consideration, the physical and economic features of the tract. The process of determining the assessment included the following important operations:—

(*i*) The division of the villages of the taluk into groups.

(*ii*) The determination of the aggregate for the area under settlement by an examination of the revenue history and economic condition of the tract.

(*iii*) The distribution of the aggregate for the whole area over the grouns bv means of maximum rates for the various classes of lands.

For the purpose of dividing the tracts into several groups, the divergent conditions prevailing in the various portions of the taluk, are taken into consideration. For the fixation of maximum rates, the physical features and general, social, economic and agricultural conditions, prices of agricultural commodities and developmental activities and other public amenities are taken into account. The rate of revenue is worked out by taking into consideration the average yield of the principal crops, the prices of agricultural produce and the ordinary expenses of cultivation. The physical considerations like climatic conditions, rainfall, proximity to markets, means of communications and standard of husbandry also are taken into account while determining the assessment at the time of settlement, and the net profit derived therefrom are all fully considered and then a certain portion of the net income is determined as the Government's share, under the head land revenue. The actual income realised by the landholders is also taken ino consideration for fixing the assessment after making certain deductions. The crop experiments are carried out in different types of soil and the outturns per acre are determined and valued. The cost of cultivation is worked out after allowing certain percentages for the vicissitudes of seasons etc., and then the net income is arrived at. At the time of the initial settlement when the prices of the commodities were very low nearly half of the net income was stamped as the assessment due to Government under land revenue. The basis for proposing maximum rates had been as follows :—

[*Statement.*

	Average yield per acre	Money value of the yield-paddy at 18 seers, Jowar at 13 seers per rupee.	20% deduction towards vicissitudes of season etc.	Remaining	Cost of cultivation per acre *viz.* ploughing, manure, seed, weeding, harvesting etc.	Net income per acre.	Half of net income.	Proposed maximum rate per acre.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Wet	.. 1,130 seers paddy.	62 12 5	12 8 10	50 3 7	13 2 8	37 0 11	18 8 6	18 0 0
Dry	.. 242 seers Jowar. ..	18 9 10	3 11 7	14 14 3	8 15 4	5 14 1	2 15 6	2 12 0

The rates thus worked out are sanctioned by Government and taking into consideration, the classified value assigned to each field, its assessment is worked out on the basis of the sanctioned rates. After the settlement rates are announced, the cultivators are allowed to prefer objection petitions regarding survey and settlement of their lands in case they are dissatisfied in any respect. The assessment so fixed is for a period varying from 15 to 30 years. This is called "empirical" method of assessment, because, the assessment is based on the impressions and observations of the settlement officers.

After the expiry of the original settlement, a revision settlement is made, preceded by an inspection of lands and recording all changes and mutations affecting classifications. As a rule, resurvey is not carried out, unless there is any defect in the original survey records. Reclassification is carried out only if it is found necessary to do so. If any Pot-Kharab area has been brought under cultivation, it is assessed. No increase in the assessment can be made at any revision settlement on account of any improvement effected by the ryot in his land during the term of settlement. The ryot is entitled to the full benefit of such improvements. Increase in assessment is made only when there is a general rise in the value of land due to a rise in prices or any improvement carried out at Government expense *e.g.*, construction of new irrigation sources or new means of communications. The enhancement at the time of revision is limited to an extent of 33⅓% in the case of a taluk, 66⅔% for the village and 100% per khata or entire holding. The enhanced revenue is realised by a process of incremental remission *i.e.*, if the increase made in the assessment during the revision settlement exceeds 20% of the pre-revision settlement rate, in first year 20% of the increase is levied and thereafter an additional increase of 10% every year, so that the full increase is recovered in the 9th year.

Para 2.—Brief Summary of the reports on settlement and resettlements made in each district together with the special conditions obtaining in it.

Different tracts in each district were settled and resettled in different years, though the principles adopted in the settlements and the resettlements of the Telangana region are the same. The rainfall, soil fertility, agricultural practices, yields of crops along with the prices of staple food crops at each settlement and resettlement, the facilities of irrigation available and the maximum rates of assessment are described separately for each district in the following pages of this chapter.

ADILABAD DISTRICT

Introductory.—Adilabad was only a sub-district and was known as Sirpur-Tandur-Amaldari, from 1297 F. to 1313 F. It was given the status of a district in 1314 F. with 8 taluks. Later Utnoor and Boath taluks were constituted in 1322 F. and Khanapur taluk (Mahal) after abolition of Jagirs. But during the reorganisation of States, Kinwat and Rajura were transferred to the Bombay State while the 3 circles of Mudhole taluk in Nanded district (now in the Bombay State) were transferred to Adilabad district constituting into one taluk. At present the district comprises 10 taluks consisting of 1,715 villages including 184 deserted ones. The total area of the district is 6,242 sq. miles with a population of 8,31,600.

The district is situated between 19° and 19° 56′ north latitude and 77° 53′ and 80° 0′ east longitude. It is bounded on the north and west and east by Bombay State and on the south by Nizamabad and Karimnagar districts.

The 'Sahyadriparwat' of the Satpura range of hills traverses the district from the north-west to the south-east for about 175 miles and is mostly covered with thick forest and abounds in valuable timber of all types and teems with wild life. About a third of the district is covered by rich forests.

The most important river which drains the southern region is the river Godavari, which flows on the southern border. The river Kadam is one of its tributaries. It rises in the Sahyadriparwat in Boath taluk. Next in importance is the river Pranhita which flows on the eastern border and falls into the Godavari at Chinnoor.

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There are two railway lines of the Central Railway (Broad & Metre gauge sections) one Kazipet-Balharsha line and the other Hudkhed-Adilabad, lines covering a total length of 100 miles. There are 317 miles of roads connecting important centres of the taluks. The national highway No. 7 from Hyderabad to Nagpur runs through this district touching Nirmal and Adilabad towns. Drinking water facilities are not adequate in villages (on the hilly tracts) of the taluks of Boath, Sirpur, Nirmal and Utnoor. Agricultural labour is available in almost all taluks. In interior villages, cultivators help their neighbours in agricultural operations. The wages are, however, very low in the district. The prices of agricultural lands during the period 1947 to 1954 are worked out as below :

	Maximum	*Minimum*	*Average*
Dry ..	Rs. 209-4-7 per acre (250 times the land revenue)	Rs. 50 per acre (57 times the land revenue)	Rs. 127-4-0 per acre (123 times the land revenue)

Wet ..	Rs. 969-8-8 per acre (127 times the land revenue)	Rs. 48-10-2 per acre (48 times the land revenue)	Rs. 363-4-0 per acre (42 times the land revenue)

The value of the dry land per acre in general is very high when compared with that prevailing in the adjoining district of Nizamabad, as the black cotton soils yield better crops without much manuring.

2. *Soil.*—The soils in Adilabad district are classified broadly into the ' Regad ' or Black Cotton soil and Chalka lands (both red & black). In between these two belts, there is a large area of what is locally called ' Milva ' type of soil. It is brownish in colour and is actually a mixture of both B.C. and the Chalka varieties. The northern portion of the district consists of B.C. soil and the southern and south-eastern half consists of chalka soil except for a narrow strip of land all along the Godavari and the Penganga rivers.

The eastern portion of Asifabad, western portion of Utnoor consist of B.C. soil while the northern half portion of Adilabad, Boath and Madhole taluks have rich B.C. soils. Nirmal and Sirpur taluks contain both B.C. and chalka varieties but the chalka soil in Nirmal taluk is of superior quality. Khanapur, Laxettipet and Chinnur taluks have chalka type of soils.

The alluvial soil on the banks of the rivers and along streams is the most fertile in Adilabad, Nirmal, Khanapur & Luxettipet taluks. The soil of the villages situated in the valleys along the Satpura range in Utnoor and Boath taluks is also quite fertile. The soil on the slopes of hills in the villages situated in Utnoor, south-east Boath, Asifabad, Adilabad and Luxettipet taluks is very shallow and poor. There are many virgin soils which have been brought under cultivation recently in Utnoor & Asifabad taluks.

3. *Climate.*—The district is comparatively unhealthy in Telangana, owing to the large area of forest. The hilly and forest areas are malarial. The villages situated in the plains are healthier. Asifabad, Sirpur and Utnoor are the malarial taluks.

The annual rainfall of the district is the highest in the Telangana with an average of about 41.07 inches for the last 35 years and 39.54" for the last decade. Average yearly rainfall for the last 10 years is as follows :

1947-48	.. 39.88 inches	1949-50	.. 53.45 inches
1948-49	.. 38.01 ,,	1950-51	.. 26.54 ,,

1951-52	.. 33.52 inches	1956-57	.. 50.42 inches
1952-53	.. 28.64 „	1954-55	.. 39.81 „
1953-54	.. 53.83 „	1955-56	.. 31.30 „

More than 80% of the total rainfall is received generally during June to September from the south-west monsoons.

4. *Irrigation.*—The Godavari north canal project is the only major irrigation scheme in the district. The Kadam reservoir which has been constructed by putting up a dam across the Kadam river near Peddur village, Khanapur taluk forms a part of this project. The main canal under this project is 47 miles long and is designed to irrigate 65,000 acres in the Abi and 2,000 acres in the Tabi seasons. The water from the project was first let out in 1955 after its completion. In 1958-59 an extent of 8,524.38 acres was irrigated in Abi as against 2,414.0 acres in 1956-57. But the dam breached on 31-8-1958 due to unprecedented floods. In order to save the standing crops supply of water has been arranged by diverting natural streams and nalas into the main canal by installing pumps wherever possible. Besides, there are 5 other projects in the district. They are :

1. Laxman Chanda project in Nirmal taluk.
2. Jewili Nala project in Nirmal taluk.
3. Gangaram project in Chinnur taluk.
4. Sirala project in Mudhole taluk.
5. Old Godavari canal in Khanapur taluk.

The first 4 projects irrigate about 500 acres each. Almost all of them are in a dilapidated condition due to which the actual ayacut is not being irrigated for many years. The old Godavari canal from Khanapur anicut 25 miles long irrigates over 7,000 acres.

The number of sources irrigating 10 to 30 acres of ayacut, is 416 out of which 14 are in breached condition. Under these sources the area irrigated (in the district) is 6,348.24 acres (excluding the area in Luxettipet taluk) with a total revenue of Rs. 60,772-57 nP.

Apart from these, nalas and wells are also used for irrigation. However, the largest number of irrigation sources are situated in Nirmal, Luxettipet, Sirpur and Khanapur taluks in the area below the ghats. The area irrigated under various sources of irrigation in 1955-56 is as follows :—

	Area in acres
Government Canals	7,791
Private canals	..

	Area in acres
Tanks	44,382
Tube wells	..
Other wells	1,379
Other sources	1,744
Total irrigated area	55,296
Area irrigated more than once	15,491
Gross area irrigated	70,787

5. *Cultivation*—The outmoded wooden plough is still being used throughout the district and the methods of agriculture are very backward in the district. In the Black Cotton soil area 2 to 3 pairs of bulls are required for one plough while harrowing is done with 2 bulls. The broadcast method of paddy cultivation is mostly in vogue. Transplantation is practised only in some villages of Nirmal, Chinnoor, and Luxettipet taluqs. The land is generally ploughed for the Kharif crops in 'Arudra' or 'Punarvasu' Karties. It is ploughed once and then harrowing is done generally twice but the backward tribes, the Gonds and others, generally do the harrowing only once. The lands are not usually manured. The B.C. soil areas are very fertile and do not require any manure while the chalka or other less fertile lands are manured in alternate years or seasons (or by crop rotation). Generally farm yard manure is applied to the fields. Jowar and maize crops, generally, are not manured. Farm yard manure is applied only to the lands growing chillies, gram, wheat and paddy crop. Green leaves are also used as manure for paddy crops in some of the villages of Nirmal, Luxettipet and Chinnoor taluks, advantage being taken of proximity of large forest areas. In the interior villages of Utnoor and Asifabad taluks, no manuring is done by the 'Gonds'. Improved varieties of seeds are nowhere in use except in the villages of Nirmal and Luxettipet taluks which are more developed.

Since the introduction of developmental schemes under the first Five-Year Plan, the agricultural economy of the district has been improving and people are adopting modern methods of cultivation. With rising prices and increasing profits in agricultural commodities, the cultivators are paying more attention to agriculture and the improvement of lands. Even lands on the slopes of hills have been levelled up into plots, with bunds for wet cultivation, wherever possible. In the district bunding on a large scale, however, is not in vogue, because of the low pressure of population on the land compared with the other developed districts. Tractor-ploughing and levelling of lands have been done with the help of Agricultural Department in the commandable area of the Kadam project.

In 1956, there were 369 iron ploughs and 224 tractors in use in the district. The rotation of crops followed in this district is:—

1. Kharif paddy (rainfed), Rabi gram—Kharif jowar mixed with Red gram, Rabi fallow.
2. Kharif maize—Rabi fallow—Kharif maize.
3. Kharif cotton or sesamum, Rabi jowar—Kharif paddy and Rabi wheat and gram.

In Adilabad taluk the Kharif and Rabi areas are almost equal. Kharif crops are grown in Sirpur, Chinnur and Luxettipet taluks In B.C. soils, the extent of Rabi and Kharif crops depend on the distribution of rainfall. The percentage of area under seasonal crops of Kharif, Rabi, Abi and Tabi in 1955-56 was respectively 56%, 35.8%, 6.9% and 1·3%. The particulars of land utilisation under various heads in the district are shown below :—

	Area in acres
Total Geographical area	35,80,086
Forest	10,38,957
Barren and uncultivable land	4,70,697
Land put to non-agricultural uses	1,41,908
Cultivable waste	1,88,494
Permanent pastures	1,47,091
Land under miscellaneous trees, etc.	12,757
Current fallows	2,33,206
Other fallows	86,261
Net area sown	12,60,715
Area sown more than once	15,492

The total cropped area in the district is 12,76,207 acres out of which the area under food and non-food crops is respectively 71.8% and 28.2%. The percentage of area under principal crops in the district are as follows :—

Jowar	38.6%	Cotton	15.9%
Pulses	17.8%	Gingelly	6.0%
Paddy	8.2%	Groundnut	1.4%

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6. *Cost of Cultivation.*—The particulars of costs of cultivation of paddy and jowar per acre in various settlements are shown below :

	Paddy in I.G. Rs.	*Jowar* in I.G. Rs.
At initial settlement	21 5 5	7 8 9
At revision settlement ..	..	..
At present day.		
(*a*) Collector	137 8 0	103 0 0
(*b*) Officials who have answered the questionnaire.	143 0 0	86 8 3
(*c*) Non-officials	266 10 8	106 0 0

7. *Prices.*—The prices of paddy and jowar in different periods of settlement are given below :—

	Paddy Seers per I.G. Re. 1	*Jowar* Seers per I.G. Re. 1
At initial settlement ..	23	24½
At revision settlement	..	..
At present from Statistical Abstract 1956-57	4½	3¾

8. *Yields.*—The yields of paddy and jowar per acre of main food crops are shown below in seers :—

Name of the crop	At the time of initial settlement (Seers per acre).*	At the time of revision settlement (Seers per acre)*	PRESENT DAY (Seers per acre)		
			Director of Bureau of Statistics †	Official ††	Non-official ††
(1)	(2)	(3)	(4)	(5)	(6)
Paddy ..	740	..	470	1,800	1,400
Jowar ..	257	..	159½	195	547

SOURCES :—

* Initial and revision settlement reports of Adilabad taluk.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

†† From the answers to the questionnaires.

9. *Seasonal Conditions.*—There was no famine or scarcity conditions at any time in this district. On account of large forest areas in the district and the rich soil, fodder is also available in every village without difficulty. The amounts of remissions sanctioned during last 5 years are as under:—

Fasli year	*Amount in* • *Rs.*
1362	1,81,738
1363	1,80,839
1364	52,538
1365	62,994
1366	46,224

10. *Holdings.*—The total No. of holdings in the district is 1,64,243 with an extent of 16,35,083 acres.

11. *Features of Settlement and Resettlement.*—Due to the existence of large forest areas, Adilabad district was not developed earlier and therefore, it was initially settled as late as 1346 F, when the original settlement rates in the other Telangana districts, were revised. The first revision settlement was undertaken only in Nirmal and Boath taluks, while Mudhole taluk which was transferred from Nanded district had undergone a 2nd revision.

The existing maximum rates of the district vary from Rs. 0.85 to 2.57 for dry, Rs. 6.85 to 13.71 for wet and Rs. 6.85 to 12.85 for garden (flow). The taluk-wise groups and rates of assessment are shown in the statement appended. The period of settlement for all the taluks except Boath has expired. The revision settlement of Boath taluk will expire in 1369 F. The taluks which are due for revision are subject to the levy of Special Assessment and hence due to standardisation, in all the taluks except Boath, Mudhole and Khanapur an additional assessment at Re. 0-1-0 for wet per rupee and Re. 0-2-0 per rupee for dry is being levied.

12. *Abolition of Estates.*—In the villages of 'Jagirs', Sarfekhas' and 'Paighas' taken over by the Government, the high rates of assessment if any prevailing are being reduced and brought down to the level of the rates obtaining in the adjoining diwani (ryotwari) villages.

[*Statement.*

Statement showing the maximum rates of assessment in Adilabad district

Name of the taluq	DRY		WET		GARDEN (FLOW)	
	Group	Max.	Group	Max.	Group	Max. rate
		Rs. np.		Rs. np.		Rs. np.
1. Adilabad ..	I	1.06	I	10.28	1	8.57
	II	0.85	II	8.57		
2. Utnoor ..	I	0.85	I	6.85	I	6.85
3. Boath ..	I	1.16	I	6.85	I	6.85
	II	0.85				
4. Nirmal ..	I	1.71	I	13.71	I	10.28
	II	1.38	II	12.85	II	8.57
	III	0.95				
	IV	0.64				
5. Mudhole ..	I	2.57	I	12.85	I	12.85
6. Luxettipet ..	I	1.71	I	8.57	I	6.85
	II	1.28	II	6.85		
	III	0.85				
7. Khanapur ..	I	1.71	I	8.57	1	6.85
	II	1.28	II	6.85		
8. Asifabad ..	I	1.06	I	6.85	I	6.85
	II	0.85				
9. Sirpur ..	I	1.06	I	6.85	I	6.85
	II	0.85				
10. Chinnur ..	I	1.71	I	10.28	I	7.71
	II	1.28	II	7.71		
	III	1.06				

HYDERABAD DISTRICT

Introductory

Hyderabad district is the smallest in the State and includes the twin cities of Hyderabad and Secunderabad. Before 1956, it was comprised of 2 divisions with 5 taluks but during the reorganisation of States, three taluks, *i.e.* Pargi, Vikarabad and Tandur respectively from Mahaboobnagar, Medak and Gulberga (now in Mysore State) districts were transferred to Hyderabad district, forming into a separate division. At present the district is comprised of three divisions with 8 taluks consisting in all 1,114 villages. The total area of the district is 2,904 sq. miles with a population of 18,18,034.

It is bounded on the north by Medak, on the south by Mahaboobnagar on the east by Nalgonda and on the west by Gulberga (of Mysore State) district.

The district is mostly hilly and sparsely wooded. The city is surrounded by small hillocks ranging from 200 to 300 feet in height. The general slope of the land is from west to east and south-east.

The Rajkonda hill range runs in a south-eastern direction from Pipalpad in the then Ambarpet taluq to Deverkonda taluk in the Nalgonda district. The Anantagiri range traverses the district from the south in Mahaboobnagar district to the north up to Dharur of this district. A large portion of the range is composed of high grade laterite. Isolated granite hills are also found here and there. The centre of the district contains small hillocks of which Maula Ali, the Golconda hill and the black rock at Tirmulgiri are well known.

The most important river is the Musi. It rises in the Anantagiri hills near Sivareddipet and flows almost to the east, passing through the city of Hyderabad. This river and its major tributary have been intercepted by masonry dams to form the two artificial lakes of Osmansagar and Himayatsagar situated at a distance of about 12 miles from the city. The river Manjira, passes through two villages of the West Hyderabad taluk, on the north-west of the district. The other streams are the Sakalvani tributary of the Musi, the Haldi and Deo tributaries of Manjira. The ridge between the Godavari and the Krishna basin runs through this district. There are patches of forest areas in the southern and south-eastern parts of the district.

From Hyderabad two metre gauge lines run, one to Manmad and the other to Dronachalam. The Wadi-Kazipet broad gauge railway line runs through the district from west to east. The P.W.D. roads cover a mileage of 373 miles in the district. Among these, Shamshabad-Mahaboobnagar, Hyderabad-Suryapet and Hyderabad-Patancheru roads being portions of the 3 trunk roads lead to Raichur, Masulipatam and Bombay respectively. There are 3 regulated markets in the district. There is no scarcity of drinking water in the district. There is no difficulty in the availability of labour in the district though the agricultural labour families which were engaged, have taken to non-agricultural work like labour on roads, irrigation work or employed as workmen in big industrial concerns.

2. *Soils.*—Soils in Hyderabad district comprise mostly of sand and sandy-loams. They are generally called Chalka, or 'Dubba' soils. Sandy soils by nature are well drained and can easily be worked though they are of poor fertility. Due to the sloping nature of land and the porous nature of soils, soil erosion and washing out of plant-food is a constant process which impoverishes the soil. Due to poor moisture retentive nature of the soils, crops can be raised successfully during rainy season and with the abundance of irrigation facilities in other seasons. Clay-loams and black-cotton soils are also found in patches in Shabad and Medchal taluks. These soils are by nature more productive, due to their moisture retentive nature, and crops can be raised successfully during Rabi season also. In Pattur and Jukal regions, regar soils predominate. The soil in the river valleys and at the foot of the hills are particularly fertile.

3. *Climate.*—The climate of the district is warm and dry. Numerous big and small tanks make the climate slightly humid. From October to March the district is generally very healthy. The maximum temperature in the hottest months is 103° F. and that of coldest months is 55° F.

The annual rainfall of the district averages to 30.4″ for the last 35 years and 30.97″ for the last decade. The particulars of the average rainfall during last 10 years is given below :—

1947-48	32.17	inches.
1948-49	31.88	,,
1949-50	24.86	,,
1950-51	33.88	,,
1951-52	26.95	,,
1952-53	16.77	,,
1953-54	31.46	,,
1954-55	27.23	,,
1955-56	43.70	,,
1956-57	40.83	,,

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More than 3/4th of the annual rainfall is received generally during June to September from the south-west monsoons.

4. *Irrigation.*—There are no projects in this district. There are only tanks, kuntas and other minor irrigation sources. The 4 major tanks, *i.e.*, the Osmansagar, the Himayatsagar, the Hussain-sagar and the Mir Alam tank situated in and around the city, supply only drinking water to the twin-cities of Hyderabad. The minor tanks having an ayacut of 10, 20 and 30 acres in the district are respectively 672, 293 and 171 in number. These sources irrigate an area of 29,441.15 acres fetching a total revenue of about

Rs. 4.121 lakhs. There is one peculiar source in the district, *i.e.*, irrigation under drainage (out-fall of city). Owing to special manurial value of this water, a special rate of I.G. Rs. 16-4-6 per acre is charged. As per the Agre-Economic Survey undertaken in 1954, the number of irrigation sources including wells in disrepair are 1,075. The Irrigation Department has restored 158 tanks in the last 5 years while 200 wells have been repaired and renovated due to the efforts of the ryots in the N.E.S. blocks.

The number of tanks with an ayacut of 100 acres and above is 159 while the tanks irrigating less than 100 acres are 2,015. The irrigated area of the district in 1955-1956 under various sources of irrigation is given below :

Sources	*Area in acres.*
Government canals	9,090
Private canals	740
Tanks	47,384
Tube-wells	1,004
Other wells	44,326
Other sources	5,630
Net area irrigated	1,08,174
Area irrigated more than once	13,560
Gross area irrigated	1,21,734

5. *Cultivation.*—As the sources of irrigation in the district have not been fully developed so far, cultivation mainly depends on rains. The methods of cultivation in the district are still the same as those in the past. Agriculture is still in the undeveloped and non-mechanised stage. The means of transport in majority of cases are the same. However, since 1950 the agriculturists are making use of improved seeds, green manures, fertilizers and other artificial manures. Agriculturists with adequate resources are using pumps, tractors, improved seeds. Agriculture Department is doing extension work in the taluqs and villages. Kharif and Rabi crops are grown in June and from the middle of September respectively. In wet lands Abi and Tabi crops are grown. Tabi crop is raised when there is assured supply of water under tanks and wells. Some times a third crop is also grown during summer 'summer crop' season called 'Zayad Fasal'. A Research Agricultural Farm is established at Rajendranagar to produce improved strains of paddy and other crops.

Normally no rotation is followed in the wet lands with good irrigation. A few cultivators, however, grow a green manure crop of Sunhemp and rotate it with paddy but only on small areas. In Kharif season, the usual rotations are Jowar and maize followed by castor or groundnut. In Rabi, the rotation is Jowar, pulses, Safflower and Linseed normally. However, most of the cultivators resort to mixed cropping and grow usually the different crops in the same season together. One of these crops forms a major crop and the other one is grown in a few lines all around and in between the major crop. Jowar is the chief food crop of the district and the other principal crops are rice, bajra, ragi, maize, linseed, and cotton. Groundnut is not grown extensively in this district.

The particulars of land utilisation in the district in 1955-56 are as under :—

	Area in acres
Total geographical area	18,67,129
Forest	1,69,419
Barren and uncultivable land	1,79,138
Land put to non-agricultural use	1,25,274
Cultivable waste	58,679
Permanent pastures	1,91,608
Land under miscellaneous trees, etc.	23,207
Current fallows	2,05,372
Other fallow lands	56,299
Net area sown	8,58,133
Area sown more than once	19,459

Total cropped area of the district is 8,77,592 acres out of which the area under food and non-food crops is respectively 77.5% and 22.5%. On seasonal basis the area sown under Kharif, Rabi, Abi and Tabi is respectively 53.6%, 33.5%, 7.6% and 5.3%.

The extent of important food and non-food crops grown in the district are shown in the table below :–

1.	Jowar	26.1%
2.	Paddy	15.2%
3.	Pulses	14.2%
4.	Millets	6.8%
5.	Bajra	2.7%
6.	Ragi	2.5%
7.	Castor	9.9%
8.	Gingelly	2.4%
9.	Groundnut	2.2%
10.	Cotton	0.9%

6. *Cost of Cultivation.*—The average cost of cultivation per acre of principal food crops *i.e*, paddy and jowar calculated in various

settlements are shown below :—

		Paddy	*Jowar*
At the time of initial settlement	..	Not available	Not available
At the time of revision settlement	..	do	do
During Agro-Economic Survey in 1954	..	Rs. 255	Rs. 45
At present day:			
Officials who have answered questionnaire	..	Rs. 306 0 0	Rs. 62 12 0
Non-officials ..	..	Rs. 251 0 5	Rs. 120 14 7

7. *Prices.*—The prices of paddy and jowar in various periods are shown in the table below :—

	Paddy Seers per I.G. Re. 1	*Jowar* Seers per I.G. Re. 1
At the time of initial settlement (1301 fasli)	31½ seers	28 seers
At the time of revision settlement (1323 fasli)	14 „	13 „
At the time of Agro-Economic survey in 1954	5 „	4½ „
At present day: As per Statistical Abstract 1955-56	5¼ „	4½ „

8. *Yields.*—The yield of paddy and jowar per acre are shown below :—

Name of the crop	At the time of initial settlement (seers per acre)	At the time of revision settlement (seers per acre)	Present day (seers per acre)		
			Director of Bureau of Statistics*	Officials †	Non-officials †
Paddy ..	Not available	Not available	510	1,230	1,246
Jowar ..	do	do	67½	280	403

SOURCES :—

* From Statistical Abstract 1955-56 on the basis of randon sampling method adopted.

†From the answers to the questionnaire.

9. *Seasonal Conditions.*—The district generally escapes famine and scarcity conditions, but it suffered severely from drought owing to scanty and unseasonable rains in 1896, 1897, 1899, 1901

and 1902. In the first 2 years no fodder was obtainable and large numbers of cattle died. But after the formation of this district in 1949, no famine conditions have been reported and as the rainfall is generally fair, the district can be said to be almost free from famine. Fodder crops and green grass are also grown in the district. Wherever fodder crops are not available straw of paddy, maize and jowar are utilised for fodder purposes and, pasture lands wherever available are fully utilised. Beyond 5 to 10 miles of city of Hyderabad, there is forest area and grass lands.

Remissions and suspensions in land revenue are being sanctioned whenever there is failure of crops by pests, crop diseases or failure of water supply. The amounts of remissions sanctioned during last 4 years are shown below :—

Fasli year	*Amount*
1365	Rs. 3,34,485- 0-2
1366	Rs. 3,80,229-13-0
1367	Rs. 3,18,289- 8-8
1368	Rs. 4,16,641- 2-3

10. *Holdings.*—Total number of holdings in the district are 1,12,478 with an extent of 14,01,757 acres.

11. *Features of settlements and resettlements.*—All the taluks of Hyderabad district were initially settled from 1305 fasli to 1332 fasli, except Tandur and Vikarabad taluks which were newly formed taking a number of villages from adjoining taluks. During settlement, the taluks were divided into a large number of groups and for each group different rate of assessment was sanctioned varying from I.G. Rs. 3.42 to 0.85 per acre for dry and I.G. Rs. 24.00 to 8.57 per acre for wet. But at the time of revision settlement these rates and groups were reduced to a considerable extent to avoid confusion. The revised rates of assessment in the district vary from I.G. Rs. 2.78 to Rs. 0.85 per acre for dry, Rs. 17.57 to Rs. 10.28 for wet and Rs. 20.57 to Rs. 10.28 for garden (flow).

No particular year can be fixed for the expiry of revision as in each taluk, the revision settlement for *ex*-Jagir and *ex*-Sarf-e-Khas and diwani villages was conducted in different years by different agencies. However, a major portion of each taluk is not ripe for 2nd revision except Pargi taluk where an additional assessment at Re. 0-1-0 per rupee for wet and Re. 0-2-0 per rupee for dry is being levied under the Special Assessment Act. The existing high rates of assessment in non-diwani villages is mainly due to enhancement of classification grades during revision settlement.

The existing rates and group of diwani villages talukwise are shown below :

Sl. No.	Taluk	DRY		WET		GARDEN (FLOW)	
		Group	Maximum rate	Group	Maximum rate	Group	Maximum rate
1.	Hyderabad East ..	I	2.78	I	14.57	I	14.57
		II	2.14				
2.	Hyderabad West ..	I	2.78	I	14.57	I	14.57
		II	2.14				
3.	Shabad	I	2.57	I	20.57	I	20.57
		II	1.92	II	17.14	II	17.14
		III	1.50	III	13.71	III	13.71
		IV	1.28				
		V	0.85				
4.	Medchal	I	2.35	I	17.14		
		II	1.92	II	13.71		
5.	Ibrahimpatam ..	I	2.78	I	14.57	I	14.57
		II	2.14				
6.	Pargi	I	1.60	I	15.43	I	10.28
		II	1.28	II	12.85	I	8.57
		III	1.06	III	Combined 10.28		
7.	Tandur	I	2.14	I	12.85		
		II	1.92	II	10.28		
8.	Vikarabad	I	2.62	I	16.28		

12. *Abolition of Estates.*—About 80% of the total number of villages of Hyderabad district are non-Diwani, formerly belonging to Sarf-e-Khas, Paigah, exempted and non-exempted jagirs. These non-Diwani areas were charged higher rates of assessments than was the case in Diwani areas. These villages with the exception of some villages which belonged to small jagirdars, the rest were surveyed by the respective jagir agencies.

The villages of *ex*-Sarf-e-Khas, *ex*-Jagir andPaigah which were taken over by the Government are 833 in the district. The high assessment rates if any prevailing are being reduced and brought down to the level of the rates obtaining in the adjoining diwani (ryotwari) villages.

13. *General.*—On account of the proximity of the villages to the city of Hyderabad, the rates of dry assessment are comparatively high even in diwani villages. The settlement officers took the proximity of the city as an advantage when fixing the assessment, but due to the development of industries, and the migration of labourers for work in those concerns, it is now a disadvantage. The sites in and around Hyderabad used for non-agricultural purposes are charged at O.S. Rs. 15 per acre. Barring the city and its suburbs, the district is a poor one and the cultivators still follow the old fashioned methods of agriculture.

KARIMNAGAR DISTRICT

1. *Introductory.*—Karimnagar was formerly known as Elgandal. In 1905, the Parkal taluk was added to the district from Warangal while Chinnur and Lakshettipet were transferred to Adilabad and Siddipet to Medak district. During the reorganisation in 1953 Parkal taluk was again transferred to Warangal district. The district at present consists of six taluks with 1097 villages in all. It is a small compact district with an area of 4,504 sq. miles. The Godavari river skirts the north-eastern boundary of this district for about 76 miles separating it from Adilabad district in the north and the Bastar State of Madhya Pradesh on the east. The district of Warangal lies to its south, while Medak and Nizamabad districts are on the west. The population of the district is 14,28,168 and the density of population 317 per sq. mile.

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A range of hills extends in the north-east between Gorrapalli and Jagtial and terminates at Venulkorthi near Godavari. A second range stretches from Shanigaram to Malangur. A third range starts in the south-western corner of the district, from the valley of Manair river, and runs to the north-east intersecting the Gunigram range, and passes beyond Ramgir and terminates near Godavari.

Godavari is the main river while its tributary Manair flows from the west towards the east as far as Karlagenta and thence flows to the north till it falls into the Godavari. The Peddavagu and the Chellavagu also constitute the minor tributaries of the Godavari. At Kaleswar on the north-eastern corner of the district the tributaries Pranhita and Manair join the Godavari. This place of confluence of the three rivers is locally called "South Kasi". This place is opposite to Sirivancha which was transferred to Madhya Pradesh from East Godavari district. The eastern portion of the district is composed of Gondwana formation consisting of thick beds of sand, stones and thin clay beds.

The district has forest with a good growth of timber in an area of 101.53 square miles on the right bank of the Godavari. In Jagtial and Manthani taluks where wild game and timber of different varieties such as Teak, Nallamaddi, Sheesham, Beejasal, Andook and Loban etc., are found. After local needs are met, a large quantity of timber is floated down to Rajahmundry on the Godavari river.

All the (8) P.W.D. roads covering a mileage of 350 miles emanate from Karimnagar proper and one road connects the highway between Hyderabad and Chanda. The broad gauge line from Kazipet to Balharsha runs through the district. Out of the six stations in that stretch only Peddapalli of Sultanabad taluk is of some importance. There are in all 5 regulated markets in the district one in Sultanabad, two in Karimnagar and two in Metpalli taluks.

2. *Soils.*—The soils consist of Chalka, Masab and Regay. The Regad is utilised for 'Rabi' crops, the 'Masab' partly for garden crops and partly for 'Rabi' while Kharif crops are raised on Chalka lands. The soils of Godavari plains are of black-cotton variety but the major portion of the district is of red sandy soil which is more suited for wet cultivation than dry. In the eastern-portion of the district the soil is sandy but in the valleys, loamy soils are common. The western portion is composed of pink and grey granites traversed by numerous dolerite dykes which give rise to grey, sandy reddish, brown, and black-soils.

3. *Climate and rainfall.*—The eastern portion of the district which comprises Manthani taluk, is generally considered malarial due to the existence of thick forests. The rest of the district has, however, a healthy climate. The summer is excessively hot and the temperature rises up to 105° F. during May. The average rainfall of the district in 1955-56 is 40.90″. Generally, more than 2/3 of annual rainfall, is from the south-west monsoon from June to September.

4. *Irrigation.*—The irrigation sources in the district consist of tanks, minor projects, kuntas, nalas and spring channels under flow irrigation while the wells and Bhurkies with pumping sets, mota, koul, yatam, and guda come under lift. The principal irrigation sources of the district are the tanks and kuntas. The number of tanks with different extents of ayacut and their condition is given below :

Category of source	Condition of source		Total	Total revenue derived.
(1)	(2)		(3)	(4)
	Good	*Disrepair*		
1. Tanks with an ayacut of 10 acres and less	1,633	164	1,797	3,01,745-12
2. Tanks with an ayacut of 20 acres and less	697	96	793	
3. Tanks with an ayacut of 30 acres and less	319	51	370	
Total ..	2,649	311	2,960	

The total extent of irrigation under 'Parrekalva' in the district is 302 acres. There are five projects in the district. The extent of area irrigated and left unirrigated till 1958 in the commandable ayacut is given below :

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S.No.	Name of the project	Fixed ayacut	Ayacut brought under cultivation.	Extent left unirrigated in the commandable area.
		Ac. g.	Ac. g.	Ac. g.
1.	Manair project (Sircilla taluq) ..	14,013-27	10,451-00	3,562-27
2.	Shanigaram Project. (Karimnagar taluq). ..	4,856-08	3,799-26	1,056-22
3.	Chegaon project (Sultanabad taluq) ..	800-00	650-00	150-00
4.	Bandlavagu project. (Sultanabad taluq)	634-00	384-00	250-00
5.	Yakinpur project (Metpalli taluq) ..	1,474-02	1,033-15	440-27
	Total ..	21,777-37	16,318-01	5,459-36

Source: Collector's report.

The sources of water supply and the total area irrigated therefrom in the district are given below :

Source	*Area irrigated Acres*
1. Government canals	30,568
2. Private canals	1,932
3. Tanks	1,92,245

4.	Tube wells	583
5.	Other wells	36,901
6.	Other sources	19,806
7.	Total net area irrigated	2,82,035
8.	Area irrigated more than once	44,762
9.	Gross area irrigated	3,26,797

5. *Cultivation.*—The old traditional methods of cultivation are followed. Crop rotation is practised on black-cotton soil by alternating Kharif jowar with oil-seeds. The chalka lands are usually kept fallow for one year after growing two crops in succession. Paddy crop is grown either under broadcast system or by transplantation. The latter method is gradually gaining popularity since the crop grown under this method is less susceptible to failure and generally yields more. Ploughing is generally done with bullocks and wooden-ploughs. Since 1950, appreciable improvement is made in the agricultural economy of the district, due to the developmental activities sponsored under the First Five-Year Plan. Under various agricultural schemes introduced in the district, the agriculturists are becoming conversant with modern methods of cultivation. The modern and improved types of agricultural implements and fertilisers are being supplied either on cash or 'taccavi' basis. Demonstration farms have been established and crop competitions are organised to induce the cultivators to improve the farm yield. The table below shows the land utilisation in the district in 1955-56 :

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	Particulars	*Area in Acres*
1.	Total geographical area	29,28,371
2.	Area of forest	6,44,263
3.	Barren and uncultivable area	2,05,663
4.	Land put to non-agricultural use	1,79,711
5.	Cultivable waste	84,680
6.	Permanent pastures	1,60,784
7.	Land under miscellaneous trees, etc.	20,332
8.	Current fallows	2,88,026
9.	Other fallow lands	57,041
10.	Net area sown	12,87,871
11.	Area sown more than once	44,762
12.	Total cropped area	13,32,633

Out of the total cropped area the percentage of area under food crops and non-food crops is 75.4 and 24.6 respectively. The distribution of area under seasonal crops of Kharif, Rabi, Abi and Tabi is respectively 63.3%, 15.3%, 14.0% and 7.4%. The area under principal food crops of jowar and paddy is 23.1% and 21.2% while oil seeds *i.e.*, gingelly, groundnut and castor are respectively sown on 12.3% and 9.4% and 1.6% of the area. Cotton and tobacco are grown on 0.9% and 0.2% of the total area. There is considerable surplus of labour population.

The number of ploughs and plough-cattle respectively are 122 and 250 per 1,000 acres of cropped area. The average maximum and minimum prices of lands worked out from sale-deeds are of the following order :—

	Maximum Rs.	*Minimum* Rs.
Dry	663–6–0 per acre	72–12–0 per acre
Wet	1,135–5–0 per acre	249–8–0 per acre

6. *Cost of Cultivation.*—Jower and Paddy, being the major food crops grown extensively on large extents, were considered as representative crops for dry and irrigated lands and the cost of cultivation per acre of these crops worked out in various settlements are given below with comparison of the present day costs:—

COST OF CULTIVATION PER ACRE

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	At the time of initial settlement (1313 F.)*	At the time of revision settlement (1335 F.)*	Present day †
	I.G. Rs.	I.G. Rs.	I.G. Rs.
Paddy ..	11–56	22–13	216–75
Jowar ..	2–56	12–35	68–75

SOURCE.— *Initial and Revision Settlement reports of Karimnagar taluq.

† Average of Non-officials who have answered the questionnaire.

7. *Prices.*—The prices of jowar and paddy in the settlements together with the present day figures are shown below :—

	Prices in initial settlement (in 1313 F.)*	Prices in revision settlement (in 1335 F.)*	Present Day†
	Seers per I.G. Re. 1	Seers per I.G. Re. 1	Seers. per I.G. Re. 1.
Paddy ..	40¾ seers	12¾ seers	3¾ seers
Jowar ..	23⅓ do	11⅔ do	3¼ do

Source : *Initial and Revision settlement reports of Karimnagar taluq.

†Statistical Abstract 1955-56.

8. *Yields.*—The yields of jowar and paddy per acre worked out in the initial and revision settlement period along with the present day figures are given below :—

Name of the Crop	At the time of initial settlement (seers per acre.) *	At the time of revision settlement (seers per acre)*	PRESENT DAY		
			Director of Bureau of Statistics. †	Officials ††	Non-officials. ††
Paddy ..	2,160	1,000	399	..	905
Jowar ..	360	300	135½	..	314

Sources :

*Initial and revision settlement reports of Karimnagar taluq.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

††From the answers to the questionnaire.

9. *Seasonal conditions.*—During the past ten years there was no famine in any taluk nor even scarcity conditions. On account of excessive rains or pests and diseases, the crops have, no doubt, failed in some areas during some years but that did not lead to any famine or scarcity conditions. Remissions or suspensions were,

however, granted for failure of crops to the ryots. Likewise, fodder scarcity was also never experienced in any place during the last decade. The particulars of remissions sanctioned during last 5 years are given below :—

Fasli	*Amount* *Rs.*
1362	.. 15,10,250
1363	.. 5,53,391
1364	.. 6,07,359
1365	.. 5,96,218
1366	.. 3,56,437

10. *Holdings.*—The total number of holdings in the district are 3,02,593 with an extent of 17,73,659 acres.

11. *Features of original settlement.*—The original settlement of this district was complete during 1315 fasli to 1319 fasli. The taluk-wise particulars of settlement are given below :—

(*a*) KARIMNAGAR TALUK.

The initial settlement of this taluk was done in 1315 fasli. The taluk then had 3 groups in dry assessment and two groups in wet assessment. The following maximum rates were sanctioned :—

	O.S. Rs.		
Dry I group	3	0	0
II „	2	8	0
III „	2	0	0
Wet I group	15	0	0
II „	12	0	0

(*b*) JAGTIAL TALUK.

The initial settlement of this taluk was done in 1315 fasli. There were three dry groups and one special group, 3 groups in wet assessment, one group for garden (flow) and 2 groups for garden (lift). The following maximum rates were sanctioned :—

	O.S. Rs.		
Dry Special group	3	0	0
I „	2	8	0
II „	2	4	0
III „	2	0	0
Wet I „	15	0	0
II „	12	0	0
III „	10	0	0

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		O.S. Rs.
Garden (flow) Group		12 0 0
„ (lift) I	„	7 0 0
II	„	6 0 0

(*c*) SIRSILLA TALUK :

This taluk was initially settled in 1315 F. The groups and maximum rates then sanctioned are shown below :

		O.S. Rs.
Dry	I Group	3 0 0
	II „	2 8 0
Wet	I „	20 0 0
	II „	17 0 0

(*d*) HUZURABAD TALUK :

The taluk was initially settled in 1316 F. The taluk then had 3 groups for dry assessment and two groups for wet assessment. The following maximum rates were sanctioned :—

		O.S. Rs.
Dry	I Group	2 12 0
	II „	2 4 0
	III „	1 10 0
Wet	I „	14 0 0
	II „	12 0 0

(*e*) MANTHANI TALUK :

The initial settlement of the taluk was done in 1318 F. for a term of 15 years. The sanctioned maximum rates of this taluk were :

		O.S. Rs.
Dry	I Group	1 10 0
	II „	1 2 0
Wet	I „	12 0 0
	II „	10 0 0

(*f*) SULTANABAD TALUK :

The initial settlement of the taluk was done in 1316 fasli The taluk then had three groups for dry and two groups for wet assessment. The maximum rates sanctioned at that time were :—

		O.S. Rs.
Dry	I Group	2 4 0
	II „	1 12 0
	III „	1 4 0
Wet	I „	12 0 0
	II „	10 0 0

12. *Features of resettlement.*—The particulars of the 1st revision settlement of each taluk are given below :—

(*a*) KARIMNAGAR TALUK :

The revision settlement of the taluk was done in 1340 F As per the revised set up, the taluk consists of 179 villages in all.

The taluk had two groups in dry and wet assessment and one group in garden (lift) and (flow) and one group for combined sources. The following maximum rates were announced :—

		O.S. Rs.			I.G. Rs.		
Dry	I Group	3	0	0	2	9	1
	II ,,	2	8	0	2	2	3
Wet	I ,,	17	0	0	14	9	1
	II ,,	15	0	0	12	13	8
Garden (lift)		7	8	0	6	6	10
,, (flow)		15	0	0	12	13	8
Combined source		15	0	0	12	13	8

This taluk will be due for second revision in 1369. (1960 A.D.)

(*b*) JAGTIAL TALUK :

The taluk was revised in 1355 F. It consists of 155 villages including one deserted one. The taluk had 2 groups each for dry, wet and garden assessments and 1 group for combined sources. The following maximum rates were announed :—

		I.G. Rs.		
Dry	I Group	2	9	1
	II ,,	2	2	3
Wet	I ,,	13	11	5
	II ,,	12	0	0
Garden (lift)		6	0	0
,, (flow)		10	4	6
Combined sources		10	4	6

The taluk will be due for second revision in 1374 (1965 A.D.)

(*c*) SIRSILLA TALUK :

The revision of this taluk was done in 1359 fasli. As per the revised set up, this taluk consists of 173 villages including five deserted ones. The taluk had two groups each for dry and wet assessments, two groups for garden (lift) and two for garden (flow). The following maximum rates were announced :—

		I. G. Rs.		
Dry	I Group	2	15	11
	II ,,	2	5	8
Wet	I ,,	15	6	10
	II ,,	13	11	5
Garden (lift)	I ,,	7	11	5
,, ,,	II ,,	6	13	8
,, (flow)	I. ,,	15	6	10
,, ,,	II ,,	13	11	5

The taluk will be due for second revision in 1378 F. (1969 A.D.)

(*d*) HUZURABAD TALUK :

The first revision settlement of this taluk was done in 1354 F. It consists of 132 villages in all. The taluk had one group each for dry, wet, garden (lift) and (flow) assessments. The following maximum rates were sanctioned :—

	I. G. Rs.		
Dry Group	2	9	1
Wet ,,	12	13	8
Garden (lift) group	6	6	10
,, (flow) ,,	12	13	8

The period of revision will expire in F. 1373 (1970 A.D.).

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(*e*) MANTHANI TALUK :

The taluk consists of 170 villages including 29 deserted ones. The settlement period of this taluk had expired in 1338 F. (1929 A.D.). The field operations of revision work were completed only by 1955. The results of the revision have not been so far announced. The existing maximum rates with groups are given below :—

		I. G. Rs.		
Dry	I Group	1	6	2
	II ,,	0	15	4
Wet	I ,,	10	4	6
	II ,,	8	9	1
Garden (lift)	,,	4	4	6
,, (flow)	,,	1	8	9

(*f*) SULTANABAD TALUK :

The rates of taluk were revised in 1955 A.D. The taluk consists of 188 villages which includes one deserted village. The taluk had two groups each in dry and wet assessment and one group each for garden (lift) and (flow). The following maximum rates were sanctioned :—

			I.	G.	Rs.
Dry	I	Group	2	9	1
	II	,,	2	2	3
Wet	I	,,	13	11	5
	II	,,	12	0	0
Garden (lift)		,,	6	0	0
,, (flow)		,,	10	4	6

The period of revision will expire in 1970 A.D.

(*g*) METPALLI TALUK :

The taluk had been formed taking over 86 villages from Jagtial, 14 villages from Armoor of Nizamabad district. As per the revised set up, this taluk consists of 100 villages including 2 deserted villages. The existing groups and maximum rates of this taluk are given below :—

			No. of villages	I.	G.	Rs.
Dry	I	Group .	15	2	9	1
			17	2	5	8
	II	,,	28	2	2	3
Wet	I	,,	2	17	2	3
			10	14	9	1
			65	13	11	5
	II	,,	1	12	13	8
			18	12	0	0

No particular year can be assigned for its revision. However, the taluk will be due for revision partly in 1375 F. and partly in 1362 F. as per the years prescribed for Jagtial and Armoor taluks.

13. *Estates Abolition.*—There are 139 ex-Jagir villages and 23 Sarf-e-Khas villages in the district. In all these villages survey-settlement has been completed and the rates of assessment prevailing in the adjoining diwani villages are being applied.

KHAMMAM DISTRICT

1. *Introductory.*—The area forming Khammam district was previously a part of Warangal district. As a result of amalgamation of *ex*-jaghir villages and reorganisation of taluks of erstwhile Hyderabad State in 1950, the Warangal district was bifurcated and the new district (Khammam) came into existence on 1-10-1953 with an area of 3,982.45 sq. miles. It consists of two divisions Khammam and Kothagudem. In Khammam division there are two taluks—Khammam and Madhira. In Kothagudem division there are three taluks—Yellandu, Palwancha and Burgampahad. The district is bounded by Mulug, Pakhal taluks of Warangal district on the north, Mahbubabad taluk of Warangal district and Suryapet and Huzurnagar taluks of Nalgonda district on the west, Krishna and Godavari districts on the south and east. River Godavari forms the eastern boundary of the district. The average height of the tract is 600 feet above the sea-level. The eastern part of the district is covered with thick forests. There are a few minor isolated ranges of hills. The important inland rivers are the Kinnarsani, a tributary of the Godavary which drains the north-eastern part of the district and the Muneru a tributary of the Krishna river. There are 473 inhabited villages and 8 towns. The population of the district is 7,00,006. There are roads covering a mileage of 241 miles in this district. The Khazipet to Bezwada route of the Central Railway runs through the district from north to south. There are two branch lines one from Dornakal to Yellandu (17 miles) and the other from Dornakal to Bhadrachalam (34 miles).

2. *Soil.*—The soil is mostly sandy. But there is a considerable area of Black Chalka soil in Madhira taluk and all along the Godavari river on the western side of the district which is very fertile. In dry crops the yields are very high. The remaining portions of the district consist of Red-chalka soil and *black-chalka-soil.* In Khammam taluk the level on the whole is uneven, but the area adjoining Madhira contains black-chalka soil which is superior to the soils found in the rest of the taluk. The central and eastern portions of the district *i.e.*, greater portion of Yellandu, Palvancha and Burgampahad taluks where there are thick forests, the soil is of poor chalka type, the proportion of the sand to clay in this area being high. The soils under wet cultivation in the district include sand, sand-loams, clay-loams and heavy clays. The percentage of different soils in several taluks is as follows :—

Taluk	*Regar*	*Chalka*
Khammam	11.22%	88.78%
Madhira	46.01%	53.99%
Yellandu	4.73%	95.27%
Palvancha and Burgampahad	..	100.00%

3. *Climate and Rainfall.*—The areas on the right bank of Godavari in Burgampahad, Yellandu and Palvancha taluks are still malarial. It is generally hot and slightly humid. There are extremes of climate in this district, Khammam being the hottest taluk. The particulars of the average rainfall and the average number of rainy days are given below :—

Rainfall and rainy days

	Average rainfall	Number of average rainy days
South-west monsoon	32.56	43
North-eastern monsoon	5.07	8
Winter period	0.21	..
Hot weather period	3.17	5
Total ..	41.01	56

4. *Land Utilization.*—The table below shows the land utilization in the district.

	Particulars	Area in acres	Percentage of total area
1.	Total geographical area	2,778,961	100.00
2.	Area of forests	1,188,683	42.77
3.	Barren and uncultivable land ..	184,729	6.66
4.	Land put to non-agricultural use ..	124,792	4.49
5.	Cultivable waste	101,372	3.65
6.	Permanent pastures and other grazing lands .	172,684	6.22
7.	Land under miscellaneous trees, etc. ..	8,328	0.29
8.	Current fallows	83,852	3.82
9.	Other fallow lands	50,455	1.82
10.	Net area sown	864,066	31.09
11.	Area sown more than once ..	3,987	0.15
12.	Total cropped area	868,053	31.24

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Large areas which are cultivable but left fallow in the past in the three taluks of Yellandu, Burgampahad and Palvancha have now been developed and brought under cultivation. More and more manure is also being used. The high prices and scarcity of foodgrains were the two main features which induced the cultivators to bring under cultivation every available piece of land which was hitherto left fallow. Lands which were left uncared for due to uneconomic yields are now found quite economic and they are improved and brought under the plough. The prices of land increased and so did the investments on land..

The wet lands in Khammam district command the highest rate ranging from Rs. 500 to Rs. 2,500 per acre depending upon their productivity, location and the quality of the soil. The lowest price is recorded in Palwancha, Burgampahad and Yellandu taluks ranging from Rs. 100 to Rs. 500 per acre. Dry lands in Madira taluk command prices from Rs. 500 to 1,500 per acre. The superior soils of Madhira taluk in Yerupalam, Madhira and Ravinutala Revenue circles command the highest prices ranging from Rs. 300 to 1,500 per acre. Next to them are the dry lands of Khammam and Madhira which command from Rs. 100 to Rs. 1,000 and the last category of the lands are those which are in the taluks of Palvancha, Burgampahad and Yellandu which fetch from Rs. 20 to Rs. 200 per acre. Of late, the fertility of the soil on the banks of Godavari river has increased due to the recent Godavari floods. The lands inundated during floods are regarded to be the richest commanding prices from Rs. 1,000 to 2,000 per acre. However, these lands are not offered for sale, even for the prices quoted above, but they are leased out annually on rents ranging from Rs. 100 to Rs. 200 per acre.

5. *Irrigation.*—In Khammam district irrigation is carried on by means of tanks and wells. Advantage had been taken in the past of the undulating character of the terrain for constructing large tanks and kuntas in every village.

Wyra project is situated in this district and has been undertaken to harness the river Wyra. The area drained by this river is 152 sq. miles. This is mainly an irrigation scheme which will irrigate about 16,000 acres of land. The other major projects are the Palair project, the Bethapalli-Gangaram project, and the Singabhupalem project. A part of Khammam and Madhira taluks will also be benefited by the Nagarjunasagar after its completion. The irrigation facilities in Khammam and Madhira are better than in other taluks of the district.. The irrigation sources existing in the *ex*-jagir villages have been mostly in a state of disrepair with the result that there is very little area under cultivation in the Tabi season.

The ayacuts and the acreage left un-irrigated under different projects are as follows :—

	Ayacut	*Area left unirrigated*
	Acres	Acres Gs.
Palair project	16,084	1,887–30
Wyra project	14,557	1,213–07
Baithapally project	4,800	2,054–14
Singabhoopalem project	1,800	..

The reasons for leaving them unirrigated are : (1) non-excavation and maintenance of feeder channels, (2) non-excavation of main channels at the tail-end, (3) inadequate outlets and sluices at suitable places and (4) uneven nature of the land. The extent under minor irrigation sources in the district with an ayacut of 30 acres and less is 10,135.28 acres. The revenue derived therefrom is Rs. 85,208.27 nP. The number of tanks with different category of ayacut and their condition is given below :—

Category of source	No. of sources	*Condition of source*	
		Good	Disrepair
Tanks with an ayacut of Acres 10	666	567	99
do 20	370	352	18
do 30	171	164	7

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The sources of water supply and area irrigated therefrom in the district are given below :

	Acres
1. Government canals	28,135
2. Tanks	90,222
3. Wells	9,776
4. Other sources (spring channels, etc.)	1,409
5. Total net area irrigated	1,29,542
6. Percentage of net area irrigated to the net area sown	(14.99)
7. Total gross area of crop irrigated	1,29,542
8. Percentage of total gross irrigated area to the total area sown	(14.92)
9. Percentage of area irrigated by wells having independent ayacuts to the total area irrigated. ..	(7.55)

The practice of charging water rate separately is not in vogue in the erstwhile Hyderabad State. For the wet lands the settlement department fixed the wet assessment which comprises both the water charge and dry rate. As such the water-rate can be derived by deducting the appropriate dry rate from the wet assessment.

6. *Principal crops and yields.*—The chief agricultural products are paddy, jowar, maize and pulses. A statement showing the yields of the crops at various times and (another statement showing) the cost of cultivation and prices for the said crops are appended. The yield of different crops was being estimated according to different methods at different times. The Revenue authorities were conducting crop-experiments on the selected fields which represented the average type of the field in the taluk. Later the method of random sampling has been introduced. The average yield in the recent past of each crop has shown a substantial increase. The increase in the average yield of paddy is attributed to the following reasons :—

1. Replacement in Abi of low yielding—Do Fasla variety by high yielding of Ek Fasla variety.
2. Widespread practice of transplantation in abi instead of broadcasting.
3. The use of fertilisers.
4. Increased area under improved strains.
5. Plant protection method adoption.
6. Introduction of Japanese method.

7. *The economic conditions of ryots.*—The economic condition of the ryots in the project area should normally be better than those of the up-lands owing to their facilities of assured water supply and easy irrigation. But their condition in this district on the whole has still to be improved. The lands under the projects are generally poor. Owing to the presence of saline deposits and the marshy nature of the soil, particularly in the project lands of Wyra and Singabhupalem (in Madhira and Yellandu taluks respectively). The ryots doing wet cultivation thereunder are not therefore in a position to get sufficient yield or produce commensurate with the amount of labour and capital invested by them. The average yield per acre in these lands ranges from 4 to 10. bags, whereas the cost of cultivation exceeds 50% of the gross produce. The ryots in this area do not have large dry extents to raise cash or commercial crops to meet their necessities of life. So, they have to depend entirely on wet cultivation and the limited produce obtained therefrom. When compared to the prices prevailing in the pre-war days, the prices of food crops or food stuffs have increased by four times whereas the prices of other commodities necessary for life

have risen by six times. Thus the per-capita income of the ryots in the above projects is lower than that of ryots in upland areas who could grow commercial crops. The condition of ryots under the other two projects of Palair and Baithapally are no doubt slightly better as the soils are also better. The yields range from 6 to 16 bags per acre. The Land Commission had fixed the cost of agricultural expenses as 50% of the gross produce derived. Rotation of crops is not followed in the wet and irrigated dry lands in this district. Rotation system is observed only in respect of groundnut, red-gram and jowar crops.

8. *Holdings.*—The total number of holdings in the district is 1,15,294 with an extent of 12,05,150 acres.

9. *The initial settlement and revision settlement.*—The initial settlement and revision settlement of Khammam district were undertaken for each taluk after conducting field to field survey and classification of soil. The settlement particulars of each taluq are given below :—

(*a*) KHAMMAM TALUK :

The initial settlement was conducted in 1307 fasli (1898 A.D.). At that time this taluq consisted of 188 diwani villages and 23 jagir villages. The settlement was announced only for 188 diwani villages. These villages were divided into two groups for dry and wet assessments, and the following maximum rates were announced.

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					I. G. Rs.
Dry	I Group	140 villages	..	..	2.14
	II „	48 „	..	..	1.60
Wet	I „	107 „	..	..	13.71
	II „	81 „	..	..	12.00

On the expiry of the period of initial settlement in 1323 fasli the revision settlement work was taken up and completed in the year 1328 fasli. The revised rates were announced in the year 1329 fasli for 30 years. At the time of the revision-settlement the taluk consisted of 154 diwani and 18 Jagir villages. This was due to the changes effected at the time of Zilabandi in 1314 fasli. The taluk then had 2 groups for dry and wet assessments.

					I. G. Rs.
Dry	I Group	117 villages	..	..	2.46
	II „	37 „	..	..	1.92
Wet	I „	108 „	..	..	15.43
	II „	46 „	..	..	13.71

The above rates apply to the villages of the Khammam taluk as it was at the time of the revision. The villages from other taluks added to the new Khammam taluk will continue to bear the rates of the respective taluks in which they were situated at the time of the revision settlement. The term of the revision settlement of the Khammam taluk expired in 1359 F. and it is over due for a fresh revision settlement.

(*b*) MADHIRA TALUK :

The initial settlement of this taluk was conducted in the year 1310 fasli (1900 A.D.). The taluk then consisted of 139 diwani villages and 51 jagir villages. As far as diwani villages are concerned the taluk had three groups for dry assessment and two groups for wet assessment. The following maximum rates were announced :

					I.G. Rs.
Dry	I Group	38 villages	..	..	1.92
	II ,,	61 ,,	..	..	1.60
	III ,,	35 ,,	..	..	1.17
Wet	I ,,	28 ,,	..	..	12.00
	II ,,	111 ,,	..	..	10.28

The term of settlement was for 15 years which expired in the year 1324 fasli. The revision settlement was conducted in the year 1328 Fasli and completed in 1334 Fasli. The taluk at that time consisted of 144 diwani villages and 58 jagir villages. The taluk had three groups in dry assessment and two groups in wet assessment. The following were the maximum rates announced :

					I.G. Rs.
Dry	I Group	47 villages	..	..	2.46
	II ,,	64 ,,	..	..	1.92
	III ,,	33 ,,	..	..	1.39
Wet	I ,,	27 ,,	..	..	13.71
	II ,,	117 ,,	..	..	12.00

As stated in respect of Khammam taluk the above rates apply to the villages that comprised the former Madhira taluk. The villages that have been transferred from other taluks to the new Madhira taluk will continue to bear the rates of assessment of the respective taluk in which they were situated at the time of revision settlements. The term of revision settlement for this taluk was for 30 years and expired in 1365 Fasli. This taluk also is over due for fresh revision settlement.

(*c*) YELLANDU TALUK :

The initial settlement of this taluk was announced in the year 1309 fasli. The taluk then consisted of only 38 diwani villages. The taluk had 2 groups for dry lands and 2 groups for wet lands. The following were the maximum rates announced :

					I.G. Rs.
Dry	I Group	20 villages	..	..	1.49
	II ,,	18 ,,	..	..	1.06
Wet	I ,,	5 ,,	..	..	10.28
	II ,,	33 ,,	..	..	8.56

On the expiry of the period of the initial settlement in the year 1323 fasli, the revision settlement work was taken up and the following were the maximum rates for the two groups given in this taluk for dry and wet assessments :

					Rs.
Dry	I Group	30 villages	..	..	1.72
	II ,,	16 ,,	..	..	1.27
Wet	I ,,	12 ,,	..	..	12.00
	II ,,	34 ,,	..	..	10.28

The period of revision settlement was for 30 years which has expired in the year 1365 fasli. Thus this taluq is due for revision. In the case of this taluk also the above rates apply only to the villages that were comprised of the old Yellandu taluk. The villages transferred from other taluks to this taluk will continue to bear the assessment rates of the respective taluk from which they were transferred.

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(*d*) BURGAMPAHAD TALUK (PALWANÇHA KHALSA) :

The initial settlement of Palwancha Khalsa taluk was commenced in 1307 fasli, and it was announced in 1313 fasli for a period of 15 years. At that time the taluk consisted of 50 diwani villages under only one group for dry and wet assessments, with maximum rates of Rs. 1-8-0 and Rs. 10 respectively throughout the taluk. The period of initial settlement expired in 1327 fasli but however, it was extended up to 1352 fasli. Even to this day no revision settlement was effected and the same old rates are being levied. Out of the diwani villages initially surveyed they are only 27 villages in this taluk at present and the rest have been added to the newly created taluk of Palwancha. The remaining villages have been added to this taluk from Palwancha Samasthan.

(*e*) PALWANCHA TALUK :

This taluk has been newly formed in the year 1950 after the amalgamation of *ex*-jagir villages mainly with the inclusion of

Samasthan Palwancha. This taluk consists of 23 villages of the former Palwancha Khalsa taluk which was surveyed and settled as detailed above under Burgampahad taluk and the villages of Samasthan Palwancha added to this taluk together with those villages which were transferred from Madhira and Yellandu taluqs.

10. *Settlement of Jagirs.*—The jagirs and agraharam villages taken over by the Government have been surveyed and settled by the Settlement Department and the rates of the adjoining diwani villages are being adopted.

11. *Water charges.*—As already stated earlier the practice of charging water rate separately is not in vogue in the erstwhile Hyderabad State. For all irrigated crops under the sources in wet lands the fixed assessment of the source is charged. For second crop raised in the wet lands and irrigated under the source, half the wet assessment fixed under the source is charged. In the case of private wells only fixed dry assessment is collected. In the case of Government tanks, channels and streams etc., minimum 'Parakam' rate (wet assessment for flow) of the village is charged.

Remissions.—The particulars of remissions granted during the past 5 years are given below :—

Fasli	*Amount.*
1362	5,66,692
1363	1,91,596
1364	1,31,324
1365	1,37,278
1366	1,53,126

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YIELDS

Name of the crop	At the time of initial settlement (seers per acre). *	At the time of revision settlement (seers per acre). *	PRESENT DAY (Seers per acre)		
			Director of Bureau of Statistics†	Officials. ††	Non-officials. ††
(1)	(2)	(3)	(4)	(5)	(6)
Paddy ..	1,250	1,280	498	927	765
Jowar ..	372	300	260	380	248

SOURCES: * Initial settlement report of Madhira taluk and revision settlement report of Khammam taluk.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

†† From the answers to the questionnaire.

Prices

Name of crop	At the time of initial settlement (seers per I.G. rupee) *	At the time of revision settlement. (seers per I.G. rupee) †	Present day (seers per I.G. rupee) ††
Paddy ..	22½	22 1/6	5
Jowar ..	22 1/6	14	4⅓

Source : * Initial settlement of Madhira taluk.
† Revision settlement of Khammam taluk.
†† Statistical abstract of 1955-56.

Cultivation expenses

Name of crop	At the time of initial settlement I.G. rupees. *	At the time of revision settlement I.G. rupees †	Present day I.G. rupees. ††
			Rs.
Paddy	10.81	14.11	242, 159, 158-8-0, 174, 176-8-0
Jowar	5.34	9.59	123, 68-1-0, 67-9-0, 96, 91-8-0

Source : * Initial settlement of Madhira taluk.
† Revision settlement of Khammam taluk.
†† Answers from the questionnaires.

Particulars given below:

		Rs.	
For	Paddy ..	242	Shri Ghulam Ahmed, Dt. Agrl. Officer, Khammam.
,,	Jowar ..	123	
,,	Paddy ..	159	The Agricultural Assistant, Burgumpadu.
,,	Jowar ..	68-1-0	
,,	Paddy ..	158-8-0	do Yellandu.
,,	Jowar .	67-9-0	
,,	Paddy ..	174	do Khammam.
,,	Jowar ..	96	
,,	Paddy ..	176-8-0	The Tahsildar, Yellandu.
,,	Jowar ..	91-8-0	

MAHABOOBNAGAR DISTRICT

Introductory.—Mahaboobnagar was formerly known as Palamore. It consisted of 10 taluks. After the States reorganisation, Pargi taluk has been excluded and attached to Hyderabad district, and the taluks of Alampur and Gadwal of former Raichur district and Kodangal taluk of Gulbarga district have been included in this district increasing the number of taluks to 12. There are four revenue divisions. The present set-up of the district is as follows :

		No. of villages
I.	Mahaboobnagar division :	
	1. Mahaboobnagar	136
	2. Kalvakurti	149
	3. Shadnagar	140
II.	Narayanpet division :	
	1. Makthal	130
	2. Atmakoor	122
	3. Kodangal	155
III.	Nagarkurnool division :	
	1. Nagarkurnool	136
	2. Achampet	49
	3. Kokkapur	118
IV.	Gadwal division :	
	1. Gadwal	192
	2. Wanparthi	146
	3. Alampur	100
	Total	1,528

This district with an area of 6,981 sq. miles lies between 15°-2′ and 17°-14′ of the northern latitude and 77°-10′ of the eastern longitude. The river Krishna and Tungabhadra form its boundary on the south separating it from Kurnool and Guntur districts. Hyderabad district lies on its north, Nalgonda on the east and Raichur and Gulbarga on the west. In the south-east corner a range of flat topped hills extend from the north to the south of the Amrabad taluk. The principal river is Krishna. Its tributaries, Tungabhadra, Dindi and Peddavagu, drain the district. This district contains large tracts of forests which cover 17.2% of the total geographical areas. The taluk of Amrabad, and Kollapur are mostly covered with forests. The total length of roads in the district is 654 miles. The Secunderabad-Dronachalam metre gauge line of the Central Railway runs across the district. There are 1,510 villages and 18 towns in this district. The total population as per 1951 census is 14.38 lakhs.

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2. *Soil.*—The soils of the district may be divided into three zones. The belt along the rivers Krishna and Tungabhadra is of rich deep black soil. The western portion has sandy loam and the eastern portion contains medium black soil or Halki (light) Regad. As far as the silt and clay mixture of the soil is concerned, it is classified as sandy-loam and is lighter in its texture.

3. *Climate and Rainfall.*—The temperature and humidity vary in different parts of the district. The taluks of Nagarkurnool and Amrabad are damp, while the taluks of Makthal and Mahboobnagar are hot and dry. The average monthly temperature of the hottest month is 91° F (32.8° C) while in January it comes down to 74° F (23.3° C). The western portion of the district receives less than 25 inches of rainfall. The particulars of average rainfall and average number of rainy days are given below :—

1955-56	Average rainfall	Average rainy days
South-West monsoon	33.30	50
North-East monsoon	3.48	6
Winter period	0.01	..
Hot weather period	2.63	3
Total	39.42	59

4. *Irrigation.*—Tanks and wells are the main sources of irrigation. Irrigation under river canals is confined to Mahaboobnagar, Shadnagar, Makthal and Atmakoor taluks. Irrigation by "Parrekalva" (spring channels) is also in vogue in a few taluks. The area irrigated by different sources is given below :—

Source	Area irrigated (in acres).
1. Government canals	14,819
2. Tanks	1,66,966
3. Wells	41,494
4. Other sources (spring channels, etc.) ..	7,493
5. Total net area irrigated	2,30,672
6. Percentage of net area irrigated to the area sown	(9.51)
7. Area irrigated more than once in the same year .	23,449
8. Total gross area of crops irrigated	2,54,121
9. Percentage of the total gross irrigated area to the total area sown	(10.37)
10. Percentage of area irrigated by wells having independent ayacuts to the total area irrigated ..	(17.99)

The following are the three medium size projects in this district :

		Commandable area	Area irrigated	Area left fallow
1.	Sarlasagar ..	4,800-00	..	4,800–00
2.	Koilsagar.. ..	14,468–17	7,635–28	6,832–29
3.	Chandrasagar ..	3,600–00	1,200–00	2,400–00

The reasons for leaving some areas under each of them fallow are mentioned below. In the case of Koilsagar, channels to the tailend villages have not yet been excavated. Further the ryots are not raising paddy crops on the black-cotton soil on the ground that hard black soil•is unsuitable for wet cultivation, as salts are coming up after irrigation. The hoofs of the cattle get damaged during puddling and transplantation is difficult due to the hardness of the soil.

In the case of Chandrasagar, the Executive Engineer is taking steps to make water available for the remaining ayacut also. The Sarlasagar project commenced by the Raja of Wanaparthi before the abolition of the Samasthan has not yet been completed by the Government.

5. *Cultivation.*—The table below shows the land utilization in the district.

Particulars	Area in acres	Percentage of total area
Total geographical area	45,60,069	..
Area of forests	7,85,929	17.2
Barren and uncultivable land	2,81,598	6.2
Land put to non-agricultural uses ..	1,64,465	3.6
Cultivable waste	84,792	1.9
Permanent pastures and other grazing lands	1,97,989	4.3
Land under miscellaneous trees, etc. ..	27,890	0.6
Current fallows	4,61,392	10.1
Other fallow lands	1,30,048	2.9
Net area sown	24,25,961	53.2
Area sown more than once	25,465	0.6
Gross total cropped area ..	24,51,426	53.6

The usual system of rotation of crops is followed in this district. The main factors that influence rotation of crops are soil, climate and irrigation facilities. In this district there is a practice to grow oil seeds and castor extensively alternately with jowar. The

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cultivator gets by mixed cropping a good crop of jowar and a substantial income from the cash crop. Mixed crops are common in the rabi area. Cotton and chillies are grown in Gadwal and Alampur taluks.

6. *Cost of Cultivation.*—The cost of cultivation of dry and wet lands is given below :—

Particulars	At the time of initial settlement (per acre)	At the time of revision settlement (per acre) *	Present day (per acre) ‡
			Rs.
Paddy	Not available	O.S. 13-2-8.	287-8-10 (officials) 285-5-0 (non-officials)
Jowar	do	Not available	82-7-1 (officials) 98-12-0 (non-officials)

7. Prices

	At the time of initial settlement (per Re. in seers.) *	At the time of revision settlement (per Re. in seers) *	Present day. (per Re. in seers)
Paddy	26	10	3½
Jowar	20	6	5½

8. Yields.

Name of the crop	At the time of initial settlement (Seers per acre). *	At the time of initial settlement (Seers per acre). *	PRESENT DAY (Seers per acre).		
			Director of Bureau of Statistics †	Officials ‡	Non-officials ‡
1	2	3	4	5	6
Paddy ..	Not available	994	390	1,360	1,175
Jowar. ..	do	Not available	167	284	290

SOURCES :*Initial and Revision settlement reports of Mahaboobnagar taluk.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

‡ From the answers to the questionnaire.

9. *Seasonal conditions.*—The common pests that attack the crops in this area are 'Tella Tegulu', Leaf Shedding, Usa Tirugulta, 'Bonta purugu', 'Nella purugu', 'Nusi purugu', Paddy Hispa and Stem-borer. Preventive steps are taken by the Agricultural Department at the request of the ryots and at their cost.

10. *Holdings.*—The total number of holdings in the district is 2,26,320 with an extent of 32,07,559 acres.

11. *Features of settlement.*—The table below shows the years of initial settlement and revision settlement in each taluk of the district.

Name of the taluk	Year of initial settlement	Year of revision settlement	
	Fasli	Fasli	
1. Mahaboobnagar ..	1308	1332	
2. Kalvakurti	1309	1332	
3. Nagarkurnool ..	1311	1332	
4. Makthal	1303	1330	
5. Atmakur	..	..	Ex-Samasthan.
6. Achampet	1312	1354	
7. Kondangal ..	1303	1325	
8. Kollapur	..	..	Ex-jagirs
9. Shadnagar ..	..	..	
10. Gadwal	..	..	
11. Wanparti	..	..	
12. Alampur	1300	1320	

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The maximum dry rates range from Rs. 2.56 to Rs. 0.85 I.G., and maximum wet rate from Rs. 17.14 to Rs. 8.65 I.G., and maximum garden rates from Rs. 12 to Rs. 5.14 I.G., according to the grouping.

Taluks of Shadnagar, Kollapur, Atmakoor, Gadwal and Wanaparti are *ex*-Jagir taluks and newly created due to the abolition of jagirs in erstwhile Hyderabad State. Hence the particulars of past settlement are not available. The existing rates in the said taluks are as follows :—

	Dry	Garden (flow)	Wet
	I.G. Rs.	I.G. Rs.	I.G. Rs.
Shadnagar	1.60	15.43	15.43
	1.28	12.85	12.85
	1.05	10.28	10.28

	Dry	Garden (flow)	Wet
	I.G. Rs.	I.G. Rs.	I.G. Rs
Kollapur	2.14	17.14	17.14
	1.60	12.85	12.85
	1.38	10.28	10.28
Atmakur	1.81	17.14	17.14
	1.49	12.85	12.85
	1.17	10.28	..
Gadwal	1.71	..	..
	1.28	8.57	8.57
Wanaparti	1.92	..	12.85
	1.49	10.28	12.00
	1.28	..	..

12. *The Estates Abolition.*—In the villages of *ex*-Jagirs, *ex*-Sarf-e-khas, *ex*-Samasthan and *ex*-Paighas taken over by the erstwhile Hyderabad Government, the high rates of assessment if any prevailing, are being reduced and brought down to the level of rates obtaining in the adjoining diwani (ryotwari) villages.

13. *General.*—Except Gadwal and Alampur taluks which were transferred from Raichur district, the district is generally a poor one in the Telangana region on account of the inferior soils and inadequate rainfall. The cultivators are hard working and cultivate considerable areas under wells. This district supplies a large number of efficient unskilled labourers for project works. The labourers are called Palmore Labourers. The wages and the rates of pay for farm servants are cheaper in this district than those prevailing in other neighbouring districts.

MEDAK DISTRICT

Introductory:—Originally Medak district was comprised of 7 taluks with 1154 villages. Due to the reorganisation of the erstwhile Hyderabad State, Vikarabad taluk having 192 villages was transferred to Hyderabad district and in return 2 taluks of district of Bidar *viz.*, Zaheerabad and Narayankhed, having 172 and 137 villages respectively were included in this district making a total of 8 taluks for the district. The present set up of the district consists of 3 revenue divisions and 8 taluks as given below :

Division :*Sangareddy*	Division :*Medak*	Division: *Siddipet*
Sangareddy taluk.	Medak taluk.	Siddipet taluk.
Narayankhed taluk.	Narsapur taluk.	Gajwel taluk.
Zaheerabad taluk.	Andole taluk.	..

This district is bounded by Nizamabad district on the north, Karimnagar district on the north-east, Nalgonda district on the East and Hyderabad and Bidar districts on the south and west respectively. This district lies between 17° 25′ and 18° 19′ northern latitude and 77°48′ and 78°31′ eastern longitude. The major portions of forests are found in Narsapur and Medak taluks. The most important river in this district is 'Manjira', a tributary of Godavari which enters Medak from Bidar district and passes through the western and north-western portions of the district. The 'Pasperu', a tributary of the Manjira, enters the district from the north and flows by the side of Medak town. There are 347 miles of roads in the district. The broad gauge route enters the district from the west and the meter gauge route from Hyderabad to Manmad also passes through the district in the east. This district is a small one with an area of 3,799.67 sq. miles and a population of 11.24 lakhs.

2. *Soils.*—Chalka or Sandy loam is the predominant soil in the district. Black regad soils and red laterite soils also exist. Red laterite soil is found in Zaheerabad taluk and black soils are found in Sangareddy, Andole, Narayankhed taluks and a part of Narsapur taluk. The rest of the area of the district is all of chalka soil interspersed with small patches of black loam. The chalka soils are coarse, porous and drain off very well. They are generally poor in nitrogen, organic matter and phosphates. The clay contains kaolin and has a low moisture retentive capacity. On the whole they are reckoned to be less fertile than clay soils. Chalka soils are quite suitable for wet cultivation. The laterite soils of Zaheerabad taluk are in general richer than the chalkas in other parts. They are excellently suited for orchards and garden crops.

3. *Climate and Rainfall.*—The climate is dry and pleasant from September to June. But during the rainy season the area becomes malarial. The minimum temperature drops to 45° (7.2°C) and maximum temperature rises to 100 F. (37.8°C). The particulars of rainfall are given below :

Rainfall and Rainy days :

	Average Rainfall		Average Rainy days
South-West Monsoon	47.34	inches	57
North-East Monsoon	2.94	,,	4
Winter period	..		..
Hot-weather period	3.25	,,	4
Total	53.53		65

4. *Irrigation.*—Tank irrigation is the main stay of the district and the whole district is full of tanks. The canals from the river Manjira and the Nizamsagar serve a portion of the district.

The important source of irrigation in Sangareddy taluk is 'Gangakalwa' project which was completed in 1323 F. The project feeds about eighteen tanks and kuntas distributed in five villages. At present there is paddy cultivation in about 615 acres during the Abi season under this source.

There are more than 1,000 tanks in the Medak taluk and two important projects, Mahboobnahar project and Rayanapalli project. Mahboobnahar project was constructed across the river Manjira near Ghanpur village about 8 miles south-west of Medak. This irrigates an extent of about 6,000 acres lying in 18 villages. Rayanapalli project is constructed across the Pushpal stream tributary of the Manjira river. It is 7 miles from Medak town. It will irrigate 1,250 acres if the entire ayacut is developed. At present it irrigates 656 acres 24 guntas.

The other important project is the Fatahnahar in the Andole taluk, which irrigates 11 villages in Andole taluk and is designed to irrigate an area of 5,400 acres.

Under the Second Five-year Plan three minor irrigation projects, namely, Haldiwagu, Nakkawagu and Kotapalli project will be taken up.

The sources of water supply and the area irrigated therefrom in the district are given below :

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	Particulars	*Area irrigated in acres*
1.	Government canals	12,648
2.	Tanks	1,46,297
3.	Wells	38,339
4.	Other sources (Spring channels, etc.) ..	3,498
5.	Total net area irrigated	2,00,782
6.	Percentage of net area irrigated to the net area sown	(18.23)
7.	Area irrigated more than once in the same year .	40,566
8.	Total gross area of crops irrigated	2,41,348
9.	Percentage of the total gross irrigation area to the total area sown	(20.56)
10.	Percentage of area irrigated by wells having independent ayacuts to the total area irrigated .	(15.89)

5. *Cultivation.*—The table below shows the land utilization in the district :

	Particulars	Area in acres	Percentage to total
1.	Total geographical area ..	24,35,275	100.00
2.	Area of forests	2,26,087	9.28
3.	Barren and uncultivable land ..	2,14,207	8.80
4.	Land put to non-agricultural uses..	1,32,808	5.45
5.	Cultivable waste	1,00,325	4.12
6.	Permanent pasture and other grazing lands	2,22,787	9.15
7.	Land under miscellaneous trees, etc.	41,990	1.72
8.	Current fallows	2,47,324	10.16
9.	Other fallow lands	1,48,261	6.09
10.	Net area sown	11,01,486	45.23
11.	Area sown more than once ..	72,326	..
	Total cropped area ..	11,73,812	

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Normally no crop rotation is adopted in wet lands with good facilities of irrigation. A few cultivators however, grow green manure crop or sun hemp by rotation with paddy but only on small extents. This practice of growing green manure exists in few taluks. In kharif season, the usual rotations are jowar and maize followed by castor or groundnut. In rabi, normally the rotation is jowar, pulses and safflower and linseed. However, most of the cultivators resort to mixed cropping and grow usually two different crops of the same season together. One of these crops forms a major crop and the other one is grown in a few lines all round and in between the major crop. For example, jowar is one of the main crop and it is mixed, with minor crops such as, jute and Pulses.

6. *Cost of Cultivation.*—The cost of cultivation of dry and wet lands at various periods is given below :—

Particulars	At the time of initial settlement (I.G. Rs. per acre).	At the time of revision settlement (I.G. Rs. per acre).	Present day †
(1)	(2)	(3)	(4)
Jowar	.. ..	I.G.Rs. 12.86	I.G.Rs. 100
Paddy	.. ..	,, 19.27	,, 200

SOURCE:— † Director of Agriculture (Nandikandi Seed-Farm).

7. Prices

Particulars	At the time of initial settlement (seers per Re. 1 I.G.)	At the time of revision settlement (seers per Re. 1 I.G.)	Present day †
Paddy ..	.. 23 1/3	21	5
Jowar	.. 18 2/3	14	4½

SOURCE :—† Statistical abstract of 1955-56.

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8. Yields

Name of the crop	At the time of initial settlement (Seers per acre). *	At the time of revision settlement (Seers per acre). *	PRESENT DAY (Seers per acre)		
			Director, Bureau of Statistics †	Officials ‡	Non-officials ‡
(1)	(2)	(3)	(4)	(5)	(6)
Paddy ..	1,500	1,280	502½	1,360	1,336
Jowar ..	347	260	102½	480	369

SOURCES : * Revision settlement reports of Andole taluk.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

‡ From the answers to the questionnaire.

9. *Seasonal Conditions.*—No famine conditions have been reported in the Medak district, in the last 10 years. As there are a large number of tanks and wells—and as the rainfall is generally fair—the district can be said to be almost free from famine. In 1328 F. some scarcity was felt in Siddipet taluq but Government took adequate and timely measures. The particulars of remissions granted during the past 4 years are as follows :—

Fasli year	Amount Rs.
1363	6,94,533
1364	7,46,221
1365	6,99,003
1366	5,31,081

10. *Holdings.*—The total number of holdings in the district are 2,36,527, with an extent of 17,25,505 acres.

11. *Settlement.*—Talukwise features of initial settlement and revision settlement of the district are given below :

Sangareddy taluk.—(Kalabgur taluk) Sangareddy taluk was initially settled in 1300 F., and the period of settlement was fixed as 15 years. Revision settlement was announced in 1332 F., and the period fixed was 30 years which expired in 1362 F.

(*a*) Dry lands :—At the time of revision settlement 7 dry groups were existing with settlement rates ranging from O.S. Re. 1 to Rs. 4. Taking into consideration the facilities of transport and communication three groups were formed with the following maximum rates :

	Groups	Maximum rates I.G. Rs.
Dry	I Group	2.56
	II Group	1.92
	III Group	1.49

Proximity to Hyderabad city, facilities of transport and communications, increase in the value of the lands and agricultural commodities, construction of new sources of irrigation, were some of the factors taken into consideration for increasing the dry rates. The total dry assessment was increased by 31.31%.

(*b*) Wet lands :—At the time of initial settlement the following wet rates were introduced :

Crop	Group-I I.G. Rs.	Group-II I.G. Rs.
Abi	15.42	13.72
Tabi	21.42	19.72
Do-fasla	31.72	28.81

At the time of revision settlement only one wet group was formed with a maximum rate of Rs. 19 for single crop and Rs. 28 for double crop. 1½ Abi assessment was levied for dofasal lands. There was an increase of 3.13% on wet assessment. On the whole the increase in assessment for dry, Baghat and wet lands was 16.45%. Incremental remission was also introduced at the time of revision settlement.

Andole taluk.—The initial survey of taluk was taken up in 1298 Fasli and completed in 1299 Fasli. Classification work was started in 1299 F. and completed in 1300 F. 73 diwani villages were included in the jamabandi report and announced in 1308 F. Due to reorganisation of districts in 1314 F., villages from Tekmall, Yellareddy and Medak taluks were transferred to Andole taluk and at the time of revision settlement Andole taluk comprised of 176 villages. Revision settlement was announced in 1332 F., for a period of 30 years. The period has expired.

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(*a*) Dry lands.—At the time of revision settlement the following dry groups were existing :—

Groups	Villages	Rates I. G. Rs.	
Special Group	8	2.56	Andole
First Group	5	2.56	Medak
do	35	2.14	Andole
Second Group	41	1.72	,,
Third Group	87	1.27	,,

During the revision settlement only 3 groups were retained with the following maximum rates. I.G. Rs. 2.46, Rs. 1.92, Rs. 1.38.

(*b*) Wet lands.—At the time of initial settlement rates charged for Abi and Tabi were different and Tabi rates were higher than Abi. The following table gives the rates which were introduced at the time of initial settlement:

Crop	Group-I	Group-II	Group-III
	O.S. Rs.	O.S. Rs.	O.S. Rs.
Abi	21, 24, 17 18 16	17, 21 15 13	13, 18 12 10
Tabi	30, 48, 24 26 24	42 21 18	18, 36 16 14
Dofasla	44, 60, 35 38 34	38, 52, 36 31 27	27, 45 24 21

During this revision only two wet groups were retained with the maximum rates of I.G. Rs. 18.85 and I.G. Rs. 15.43. Sub-grouping was abolished.

> N.B.—The above rates will not apply to the villages of sarf-e-khas and jagirs which have been included after abolition of jagirs. They have separate rates.

Siddipet taluk.—The initial settlement of this taluk was announced in 1319 F., and the period of settlement was 15 years. Revision settlement was announced in 1337 F., for a period of 30 years. In the beginning this taluk was in Karimnagar district and later transferred to the Medak district at the time of Zilabandi.

(*a*) Dry lands.—Due to the inclusion of taluks Ramayanpet and Chiryal nearly 7 dry groups were existing at the time of revision settlement with maximum rates ranging from O.S. Rs. 1-4-0 to Rs. 3-4-0. These seven groups were abolished and at the time of revision only 2 groups have been formed for the whole taluk.

		Maximum rates I.G. Rs.
Group I	119 villages	2.78
Group II	33 ,,	1.92

(*b*) Wet lands.—The following wet grouping and rates were existing at the time of revision settlement:

Group	No. of villages			Maximum rates
				O.S. Rs.
I.	51	Single crop Abi	..	18
		do Tabi	..	24
		do Dofasla	..	36
II.	84	Single crop Abi	..	15
		do Tabi	..	20
		do Dofasla	..	30
III.	17	Single crop Abi	..	12
		do Tabi	..	12
		do Dofasla	..	24

During the revision settlement, 2 wet groups were formed with the following maximum rates.—

Group I	..	.. 137 villages	I.G. Rs. 17.14
Group II	..	.. 17 „	„ 13.71

Medak taluk.—Medak taluk was initially settled in 1308 F., for a period of 15 years. Revision settlement was introduced in 1339 F., for a period of 30 years.

(*a*) Dry lands.—At the time of initial settlement 4 dry groups with the maximum rates ranging from O.S. Rs. 3-4-0 to 2 were fixed. But at the time of revision, taking into consideration the facilities of communication and transport and, prices of commodities, only one group was introduced for the whole taluk with a maximum rate of I.G. Rs. 2.78.

(*b*) Wet lands.—The following chart will indicate the wet groups existing in the initial settlement.

		Group I O.S. Rs.	Group II O.S. Rs.
Abi	.. .. ..	24	18
		21	15
		22	19
Tabi	.. .. ..	48	36
		42	30
		32	28
			24
Double crop	.. ..	60	45
		52 8 0	37 8 0
		46 0 0	14 0 0

At the time of revision only two groups were formed with the maximum rates of I.G. Rs. 17.14 and I.G. Rs. 14.57. It may be observed that the practice of levying high rates in Tabi, compared to Abi was discontinued at the time of revision. The villages under Mahboobnahar project were included in the 1st group.

> N.B.—The above rates will not apply to the villages of sarf-e-khas and jagirs which have since been included with diwani after abolition of jagirs. They have separate rates.

Narsapur taluk.—This taluk was newly constituted consequent on the abolition of jagirs. It consists of the following 159 villages:—

Taluks			
(1) Narsapur (Paigah) ..	..	31	villages
(2) Hatnoora ,, ..	..	26	,,
(3) Medchal (Sarf-e-khas)	..	43	,,
(4) Medak (Kalsa) ..	..	18	,,
(5) Kalabgur ..	..	27	,,
(6) Andole ..	..	14	,,
	Total ..	159	,,

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The villages of Narsapur, Hatnoor (Paigah), Kalabgur, Andole are due for revision. The period of revision will expire in 1368 F., for the villages which were included from Medak taluk. Sarf-e-khas of former Medchal taluk (north taluk) are not due for revision at present. The maximum rates and groupings vary according to the former taluks in which the villages were situated. They are as follows :—

		No. of groups	Maximum rates	Circle
			O.S. Rs. O.S. Rs.	
Dry	..	6	3 4 0 to 1 8 0	Kowdipalli.
,,	..	8	3 4 0 to 1 4 0	Hatnoora.
,,	..	8	3 8 0 to 1 8 0	Turkhal Khanapur.
,,	..	6	3 4 0 to 1 12 0	Gumaddalla.
,,	..	5	3 4 0 to 1 8 0	Sivampet.
,,	..	7	3 4 0 to 1 8 0	Narsapur.
Wet	..	11	27 0 0 to 14 0 0	Kowdipalli.
,,	..	7	27 0 0 to 14 0 0	Hatnoora.
,,	..	6	23 0 0 to 14 0 0	Turkhal Khanapur.
,,	..	4	21 0 0 to 17 0 0	Gumaddalla.
,,	..	5	23 0 0 to 16 0 0	Sivampet.
,,	..	9	25 0 0 to 14 0 0	Narsapur.

The rates which were announced during the initial settlement of Narsapur taluk in 1330 F., still hold good so far as dry and Abi lands are concerned. Due to complaints of high rates of assessment in the paigah villages, in the year 1951, Government accorded a suspension of 3 annas per rupee in the single and double crop tabi assessments, because the do-fasla and tabi rates in the Narsapur taluk were higher than the adjoining diwani-rates.

Gajwel taluk.—This taluk is also newly constituted and comprises 169 villages. These villages are taken from the following taluks :—

Name of the taluk	No. of village	Year of settlement	Maximum rate (Dry)
			O.S.Rs.
Siddipet ..	123	1338 F.	3 4 0 to 2 4 0
Medchal ..	28	1353 F.	2 12 0 to 2 4 0
Medak ..	7	1339 F.	3 4 0
Bhongir ..	7	1339 F.	3 2 0 to 2 8 0
Jangaon ..	2	1336 F.	2 12 0 to 2 8 0 & 2 0 0
Sirsilla ..	2	1339 F.	3 4 0 to 2 12 0

Wet rates vary from O.S. Rs. 24 to O.S. Rs. 16 in the six circles. Except for the 2 villages of Sirsilla taluk and the villages of sarf-e-khas of Medak taluk, a majority of the villages are due for revision.

Narayankhed Taluk.—The initial settlement of this taluk was conducted in the year 1301 F., and the period of settlement was fixed for 15 years.

(*a*) Dry lands :—The following maximum rates were announced for dry lands:—

	Group	No. of villages	Maximum rates
			O.S. Rs.
Dry ..	.. Spl. Group	8	3 8 0
,, ..	.. 1st ,,	18	3 0 0
,, ..	.. 2nd ,,	26	2 4 0
,, ..	.. 3rd ,,	27	1 8 0

On the expiry of the period of initial settlement in 1317 F., the revision settlement was undertaken in the year 1319 F., and the period of settlement was fixed for 15 years. The following groups and maximum rates were announced :

		O.S. Rs.
Dry ..	.. Spl. Group	4 8 0
,, ..	.. 1st ,,	3 12 0
,, ..	.. 2nd ,,	2 12 0
,, ..	.. 3rd ,,	1 12 0

As a result of revised rates in the revision there was an increase of 24.48% in the land revenue.

On the expiry of 1st Revision, the 2nd Revision was conducted in the year 1336 F. Taking into consideration the communication and transport facilities, prices of commodities and cultivation expenses, etc., the following maximum rates were announced :

	Group	Maximum rates O.S. Rs.
Dry ..	.. Spl. Group	4 8 0
,, ..	.. 1st ,,	3 12 0
,, ..	.. 2nd ,,	3 4 0
,, ..	.. 3rd ,,	2 0 0

(*b*) Wet lands :—With regard to Wet and Baghat lands, the maximum rates which were announced at the time of initial settlement were continued in the 1st revision and 2nd revision also. They are as follows :—

	O.S. Rs.
Wet ..	16 0 0
Bhaghat ..	10 0 0

Zaheerabad taluk.—This taluk was newly constituted consequent on abolition of jagirs. It consists of 155 villages as detailed below:—

Khalsa ..	.. 40	Villages
Sarf-e-khas ..	.. 3	,,
Asman Jahi (Paigah)	.. 40	,,
Khurshid Jahi	.. 17	,,
Ex-Jagir ..	.. 55	,,
Total	.. 155	,,

The following dry and wet maximum rates are existing in the taluk:

Dry I.G. Rs.	Wet	Garden
3 13 8	13 11 6	12 13 9
3 8 7	12 13 9	10 4 7
3 6 10	10 4 7	8 9 2
3 0 0	5 6 7	
2 15 2		
2 10 5		
2 9 2		
2 5 8		

12. *The Estates Abolition.*—There were a number of *ex*-Jagir, *ex*-Paigah, *ex*-Sarf-e-khas villages scattered all over the district. After abolition of jagirs and sarf-e-khas, these villages were merged with the adjoining taluks, and the rates of assessment were revised as explained in para 11. The following statement indicates the number of villages which have been amalgamated with these taluks:

No. of taluks		*Sarf-e-khas*	*Paigah*	*Ex-Jagir*
Sangareddy ..	..	34	..	43
Siddipet ..	..	1	..	56
Gajwel ..	..	22	..	78
Medak ..	..	9	..	38
Andole ..	..	18	..	24
Narsapur ..	..	16	57	62
Narayan khed	..	20	81	18
Zaheerabad ..	..	3	57	55
Total	..	123	195	374

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NALGONDA DISTRICT

Introductory.

Nalgonda district lies between 16° 20′ and 17° 47′ northern latitude and 78° 45′ and 79° 55′ eastern longitude. It is bounded on the east by Khammam and Krishna districts, on the north by Warangal and Medak districts, on the west by Hyderabad and Mahaboobnagar districts and on the south by Guntur district. There are a series of hills and hillocks in the district running from north to south and south-east to north-west. Besides the forests in Nalgonda, Devarkonda and Orlakonda there is a fort constructed on a hill 2,000 feet high at Bhongir in the 16th Century. There is a famous temple of Sri Narasimhaswami on Yadgir gutta which is 7 miles from Bhongir. There is a famous Jain temple at Kulpak in Bhongir taluk. The district is very poor in forest wealth and small patches of jungle cover an area of 2,36,116 acres. River Krishna runs along the southern boundary for a length of 53 miles. The river Musi has a length of 40 miles in the district, and falls into the Krishna river at Wazirabad. The other rivers are the Hallia, the Peddavagu and the Dindi. The area of the district is 5,385 sq. miles with a population of 12,52,810. The total road mileage is 528 miles, 314 being metalled and 214 being murram. The broad gauge railway line from Secunderabad to Khazipet runs through the northern portion of the district. Nalgonda, Miryalguda Devarakonda, Ramannapet, Bhongir, Suryapet and Huzurnagar are the seven taluks of the district. The following are particulars of land utilization in the district in 1955-56.

		Acres
1.	Total geographical area	34,21,222
2.	Forests	2,36,116
3.	Barren and uncultivable land	2,56,942
4.	Land put to non-agricultural use	1,45,501
5.	Cultivable waste	84,101
6.	Permanent pastures	3,01,490
7.	Miscellaneous crops, trees, groves, etc. ..	12,091
8.	Current fallows	4,25,159
9.	Other fallows	12,585
10.	Net area sown	18,33,237

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There are 1,061 inhabited villages and 12 towns. 70.3% of the population depend on agriculture.

2. *Soils.*—The Chalka and Masab soils that cover large parts of the district have originated from the decomposed granite and hence are generally sandy and poor. In the Miryalguda and Huzurnagar taluks the soil on the banks of the Krishna river is alluvial and consists to a large extent of Black Cotton soil. In Suryapet taluk there are Black Cotton soils with admixture of sand. The soil, in general, is poor. There are several dry and arid pockets.

3. *Rainfall.*—The normal rainfall for the district is 26.8″. The particulars of average rainfall and the average number of rainy days for 1955-56 are as follows :—

	Average rainfall	Average rainy days
South-west monsoon	23.49	36
North-east monsoon	6.75	9
Winter period	0.19	1
Hot weather period	2.69	6
	33.12	52

During April and May the temperature is high and sometimes goes up to 107°. The winter is usually mild and the minimum temperature does not fall below 50° F. In August and September the moist heat is oppressive. The rainfall in the past few years has been low and unevenly distributed.

4. *Irrigation.*—The particulars of the area irrigated during 1955-56 are as follows :—

Source	*Area irrigated* Acres
1. Government canals	32,127
2. Private canals	1,130
3. Tanks :	
(*i*) With ayacut of 100 acres or more 329 (*ii*) With ayacut of less than 100 acres 3,625	1,10,441
4. Wells : (*a*) Tube wells Ac. 1,142 (*b*) other wells Ac. 55,465	56,607
5. Other sources (spring channels, etc.)	3,628
Total net area irrigated	2,03,933

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(*a*) Area irrigated more than once	8,897
(*b*) Total gross area of crops irrigated	2,93,830
(*c*) Percentage of wet area irrigated to the net area sown	(11.12)
(*d*) Percentage of gross area irrigated to the total area sown	(15.11)
(*e*) Percentage of area irrigated by wells having independent ayacuts to the total area irrigated	(19.27)

1,314 oil engines and 56 electric pumps are being operated for the purpose of irrigation in the district.

There is canal irrigation under the projects of Dindi, Pendlipakala, Bheemanapalli, Asafnaher, Utkoor, Marapalli and Shaligowraram projects. The fixed ayacut of Dindi is 12,000 acres and it has been fully developed. The ayacut under Pendlipakala project which is mainly intended for light irrigation is 4,893 acres but so far 3,630 acres only have been developed. The remaining ayacut could not be developed due to insufficient water. The ayacut fixed under Bheemanapalli project on Musi is 1,860 acres. But 1,023 acres only was developed and the remaining held up due to insufficiency of water in the project. The Asifnaher project is irrigating an ayacut of 5,537 acres as against the registered ayacut of 4,539 acres. The entire extent of Ac. 850 under Utkoor-Marepalli project has been developed. Shaligowraram project is irrigating 1,973 acres as against 1,622 acres of registered ayacut. The extent of irrigation under parrekal was is Ac. 17,076. When Nagarjunasagar project is completed portions of Miryalguda, Suryapet and Huzurnagar taluks will be brought under irrigation in this district. The irrigation is mostly from wells and tanks. The extent of irrigation under minor irrigation sources with an ayacut of 30 acres and less is 30,280 acres. The revenue derived therefrom is Rs. 3,20,027. The condition of tanks with ayacuts of 10, 20 and 30 acres is as follows :—

	No. of Sources in good condition	No. of sources in breached condition	Total
1. No. of tanks with an ayacut of 10 acres	2,169	298	2,467
2. No. of tanks with an ayacut of 20 acres	648	113	761
3. No. of tanks with an ayacut of 30 acres	542	164	661

The Government have encouraged the ryots to take up restoration of breached tanks by granting concessions through G.O. No. 24, Revenue, dated 22-10-1952 which says " In order to speed up the restoration of minor irrigation sources with an ayacut of 10 acres and less the restoration of tanks with an ayacut of 10 acres having been taken up by the P.W.D. under the 5-year plan, Government have decided to authorise the Collectors to grant permission to the cultivators to restore such tanks at their own cost and to recompense them by remitting in the event of restoration of tanks the land revenue for a period of two years from the date of restoration."

5. *Cultivation.*—The crops that are grown in the district are cholam, sajja, paddy and oil seeds. The particulars of cultivation during 1955-56 are as follows :

		Area in acres
1.	Total area under food crops	14,28,543
2.	Total area under non-food crops	5,15,805
	Total gross cropped area ..	19,44,348
	Area cropped more than once	1,11,111

	Ac.		
Area under paddy	2,85,044	14.66%	of the total cropped area.
,, ,, cholam	5,29,706	27.24%	,,
,, ,, cumbu	3,14,795	16.19%	,,
,, Other cereals	58,814	3.04%	,,
,, Pulses	2,10,588	10.83%	,,
,, Condiments or spices ..	25,353	1.30%	,,
,, Fruits and vegetables ..	4,241	0.22%	,,
,, Sugarcane	2	..	..
,, Fibres	16,039	0.82%	,,
,, Oil seeds	4,91,435	25.28%	,,
,, Drugs and narcotics	5,525	0.34%	,,
,, Fodder crops	1,796	0.09%	,,
,, Miscellaneous	10	..	

The sowing, harvesting and peak marketing seasons of the principal crops are given below :—

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	Paddy	Cholam	Sajja
Sowing	June-July November-January.	June-July. October.	June-July.
Harvesting	November-April.	November-December. March-April.	October.
Peak marketing	January-June.	February-March. May-June.	December-March.

The Collector reports that the estimated extent of crop damaged by pests and crop diseases is 20 to 30 per cent of the cultivated area.

6. *Cost of cultivation.*—The following statement shows the costs of cultivation of the chief crops at various times.

	Paddy I.G. Rs.	Cholam I.G. Rs.
1. At the initial settlement, 1902	12.86	2.47
2. At the resettlement, 1925	22.47	14.14
3. At the present time :		
(*a*) According to the District Agricultural Officer	335 7 0	66 13 0
(*b*) Collector	148 0 0	28 0 0
(*c*) Ryots who have answered the questionnaire	310 10 3	62 9 11

7. *Prices.*—The prices of the chief products at various times are shown below :

	Paddy Lbs. per rupee	Cholam Lbs. per rupee
1. At the time of settlement, 1902-03	53	46
2. At the revision settlement, 1925	32	18
1929	26	16
1944	38	26
3. At the present time (1956-57) according to Bureau of Statistics.	8.7	7

8. *Yields.*—The yields of the chief crop per acre at different periods have been given below :—

Name of the crop	At the time of initial settlement (Seers per acre.)*	At the time of revision settlement (Seers per acre.)*	PRESENT DAY (Seers per acre)		
			Director, of Bureau Statistics.†	Officials.††	Non-Officials.††
1	2	3	4	5	6
Paddy	1,673	1,250	436	1,280	884
Jowar	203	245	152	240	194

Sources : Initial and revision settlement reports of Nalgonda taluk.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

†† From the answers to the questionnaire.

9. *Seasonal conditions.*—There have been no cases of recent famines but scarcity conditions often pevail in the district due to the vagaries of the monsoon. The particulars of remissions granted during the last 5 years are as follows :—

Fasli	Rs.
1362	14,60,418
1363	6,57,272
1364	7,33,781
1365	6,58,331
1366	5,31,806

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10. *Holdings.*—The total number of cultivation holdings in the district is 2,34,369 with an extent of 27,08,316 acres.

11. *Features of the settlements.*—The table below shows the years of initial settlement, resettlement and the year when the tract is due for a 2nd revision settlement.

Name of the taluk	Year of initial settlement	Year of revision settlement	Year in which 2nd revision is due
1. Bhongir	1905	1929	1958
2. Ramannapet ..	1905	1929	1958
3. Devarakonda ..	1910	..	..
4. Huzurnagar ..	..	1944	1963
5. Miryalguda ..	1903	1944	1963
6. Suryapet	1903	1944	1963
7. Nalgonda ..	1902	1926	1945

The rates fixed at initial and revision settlement are shown below :—

(*i*) *Bhongir taluk :*

		Initial settlement rates I.G. Rs.	*Revision settlement rates* I.G. Rs.
Dry	I Group	2.36	2.67
	II ,,	1.72	2.35
	III ,,	1.27	..
Wet	I ,,	12.86	15.43
	II ,,	11.14	
	III ,,	9.42	

(*ii*) *Ramannapet.*—This taluk was part and parcel of Bhongir taluk. The rates applicable to Bhongir are prevailing in this taluk.

(*iii*) *Devarkonda taluk.*—The initial settlement rates announced in 1910 are as follows :—

		I.G. Rs.	
Dry	I Group	1.49	101 Villages
	II ,,	1.27	65 ,,
Wet	I ,,	12.86	53 ,,
	II ,,	10.28	58 ,,
	III ,,	8.57	55 ,,

The term of the initial settlement was fixed as 15 years. But in the year 1925 it was extended up to 1942. Even afterwards the revision settlement was not taken up. As this is a taluk overdue for settlement the special assessment of Re. 0-1-0 and Re. 0-2-0 per rupee of wet and dry rates repectively is being levied at present from the year 1952.

(*iv*) *Huzurnagar taluk.*—This taluk was formed at the time of realignment of districts in 1904, from out of Khammam, Suryapet and Miryalguda taluks. The rates fixed for the initial settlement of these taluks continued in the villages of the taluk till a revision was announced in the year 1944 for 20 years.

		Initial settlement rates I.G. Rs.	*Revision settlement rates* I.G. Rs.
Dry	I Group	2.36	2.36
	II ,,	1.92	1.92
	III ,,	1.76	
	IV ,,	1.72	
	V ,,	1.60	
		1.49	

			Initial settlement rates I.G. Rs.	Revision settlement rates I.G. Rs.	
Wet	I Group	.. ..	13.71	13.71	
	II ,,	.. ..	12.85	11.14	
	III ,,	.. ..	12.00	..	
	IV ,,	.. ..	11.14		
			9.42		
(v) Miryalguda taluk :					
Dry	I Group	.. ..	1.92	1.81	
	II ,,	.. ..	1.72	1.49	
	III ,,	.. ..	1.49		
	IV ,,	.. ..	1.27		
	V ,,	.. ..	1.06		
Wet	I ,,	.. ..	15.43	11.14	
	II ,,	.. ..	12.85		
	III ,,	.. ..	12.00		
	IV ,,	.. ..	11.14		
(vi) Suryapet taluk :					
Dry	I ,,	.. ..	1.81	1.81	
	II ,,	.. ..	1.49		
	III ,,	.. ..	1.17		
Wet	I ,,	.. ..	12.00	11.14	
	II ,,	.. ..	9.42		
(vii) Nalgonda taluk :					
Dry	I ,,	.. 89 villages	2.36	2.89	80 villages
	II ,,	.. 27 ,,	1.92	2.36	21 ,,
	III ,,	.. 76 ,,	1.49	1.81	69 ,,
Wet	I ,,	.. 51 ,,	15.43	18.00	54 ,,
	II ,,	.. 90 ,,	12.85	14.57	69 ,,
	III ,,	.. 51 ,,	10.28	6.85	13 ,,

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12. *Abolition of Jagirs, Sarf-e-Khas and Paigahs.*—The Jagirs, Sarf-e-Khas and Paigahs have been merged with diwani. The high rates of assessment if any prevailing in these areas are being brought down to the level of the rates prevailing in the adjoining diwani (ryotwari) villages. This district is considered to be the poorest in Telangana.

NIZAMABAD DISTRICT

Introductory.—Nizamabad was formerly known as Indore district. It's set up was modified twice. In 1905, the Nirmal and Narsapur taluks were transferred to the new district of Adilabad, and Mudhol and part of Banswada to Nanded district. The rest of Banswada was further divided between Bodhan and Yellareddy while Bimgal (a sub-taluk) was merged in Armoor. Again in 1933 the Banswada taluk was formed taking over villages from Bodhan and Yellareddy taluks. On the eve of the reorganization of States also some villages of Deglur taluk (Nanded district) have been included in Banswada. At present, the district comprises six taluks consisting of 922 villages in all. The area of the district is 3,203 sq. miles with a population of 8,33,611. The district fetches the largest revenue in Telaganga on account of the Nizamsagar project.

Nizamabad lies between 18°5′ and 19°30′ north latitude, 77°40′ and 79° east longitude. The district is bounded on the north by Adilabad district, on the east by Karimnagar district, on the south by Medak and on the west by Bombay State.

There are a few minor ranges of hills in the south-west and in the centre of the district. The Godavari is the largest river which flows along the northern boundary of the district for about 70 miles separating it from Nanded and Adilabad districts, while its main tributary, Manjira flows along the western border between Nanded and Nizamabad and falls in the Godavari near Kundakurthi after running for 62 miles in Bodhan taluk. Besides, there are a few smaller streams. The main perennial ones are the Phulang, traversing the Nizamabad and Armoor taluks and the Yeddul Kattavagu flowing in Kamareddy taluk.

All the taluks, except Bodhan are overgrown with forests with an abundance of wild big and small game. The most important trees in these forests are Teak, Ebony, Nallamaddi and Beejasal.

The Hyderabad-Manmad main railway line of the Central Railways passes through the district for about 80 miles and a branch line between Bodhan-Jankampet runs for about 11 miles in Bodhan taluk. All the P.W.D. roads on which the R.T.D. bus service or other services operate, cover 443 miles. One national highway No. 7 in the district connects the Hyderabad-Nagpur trunk road for about 71 miles. There are 2 regulated markets in the district. One in Nizamabad town, and the other at Kamareddy. The existing number of ploughs and plough cattle in 1955 in the district are worked out at 156 and 242 per 1,000 acres of total cropped area.

The average prices of dry and wet lands per acre during the ten years ending 1954 mentioned in the Agro-Economic Survey Report are given below talukwise.

	Dry land per acre			Wet land per acre		
	Rs.			Rs.		
(1) Nizamabad taluk	233	7	0	326	3	0
(2) Armoor taluk	210	0	0	283	0	0
(3) Kamareddy taluk	103	0	0	545	8	0
(4) Banswada taluk	134	9	0	331	8	0
(5) Yellareddy taluk	60	0	0	344	0	0
(6) Bodhan taluk	185	15	0	328	1	0

According to the last census of 1951, the agricultural labour forms 13.8% of the total population of the district. In the area commanded by the Nizamsagar project, there is scarcity of labour and much difficulty is felt in getting them in the right time and at reasonable wages. The wages rise up to Rs. 1-8-0 per day for even woman labour. However, this situation is met to a certain extent by seasonal migration of the agricultural labour from the adjoining district of Nanded. In other areas where there is not much wet cultivation, the supply of agricultural labour is quite abundant and there is no difficulty, whatsoever.

2. *Soil.*—Nizamabad district presents a mixture of the physical features and geological aspects of Telangana and Marathwada regions. A large area of black-cotton soil is spread over all along the Manjira and Godavari rivers in the north and western portions of the district which comprises Armoor, Nizamabad, Bodhan, Banswada and the western portion of Kamareddy taluks. The soil is very fertile and the yield of dry crops in this area is very high. The remaining portion of the district consists of red chalka soil. In between these two belts there is a small belt of black chalka soil which is locally called 'Mailwa'. In the central and southern

portion of Nizamabad, the eastern portion of Banswada taluks where there are thick forests, the soil is of poor chalka type, in which the proportion of sand-to-clay is high.

The soils under wet cultivation in the district include sandy, sandy-loam, clay-loam and heavy-clay. The clay-loam soils are the predominant types and they record the highest yields. Sandy loams are present in Banswada taluk and in the non-perennial zones of Nizamsagar. Heavy clays are found in Banswada taluk and some villages of Bodhan taluks. Small patches of alkaline soils and low lying ill drained patches are found scattered in all the taluks of this district particularly in Kamareddy.

3. *Rainfall.*—The climate of the district is healthy from February to the end of May, but it is damp and malarious during rains and the cold season, giving rise to fever and ague. A major portion of the district in the west and north is rather humid due to net work of irrigation canals running through the area. The temperature goes up to 110° in May.

The annual average rainfall is about 39.17″ for the last 34 years and 43.45″ for the last decade.

Average yearly rainfall for the last 10 years is as follows :—

1948-49	.. ..	41-83 inches
1949-40	.. ..	45-04 „
1950-51	.. ..	31.22 „
1951-52	.. ..	40-14 „
1952-53	.. ..	24-44 „
1953-54	.. ..	54.91 „
1954-55	.. ..	43.51 „
1955-56	.. ..	53.00 „
1956-57	.. ..	61.15 „
1957-58	.. ..	39.29 „

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More than ¾th of the total rainfall is generally received between June and September, from the south-west monsoon and the remaining between October and November from the north-east monsoon.

4. *Irrigation.*—The Nizamsagar with its net work of canals and distributaries, is the main source of irrigation in the district. In the commandable area of the project, there are 321 villages situated in Banswada, Bodhan, Nizamabad and Armoor taluks. The cultivated area covering these villages under the project is 1,39,732 acres. The main cultivation under the project is paddy and

sugarcane and to some extent turmeric. An area of 94,771 acres of dry land has been converted into wet. The area estimated to be commandable under Nizamsagar project is 2.75 lakhs acres while the area irrigated in 1956 is 1.65 lakhs acres. The remaining area could not be irrigated as the capacity of the existing main canal requires improvement to increase the ayacut under the 1st crop. Next in importance is the Pocharam project situated at the southern boundaries of Yellareddy taluk. The forecast of wet area under this project is about 9,519.0 acres. Its main canal known as Mahbub canal is 16 miles long and irrigates 41 villages in Yellareddy taluk. Out of this 9,367.10 acres are irrigated in Abi and 5,891.18 acres in Tabi season.

In the non-perennial zone of Nizamsagar and in the villages above the canal, the sources of irrigation are the tanks, kuntas and wells. There are 625 tanks with ayacuts of 10 acres and below while 806 tanks with ayacuts ranging between 10 and 50 acres. Out of these tanks, 244 of the former and 346 of latter class are in disrepair. Besides these, nalas and wells also irrigate lands in each taluk.

In the perennial zone, the lands are constantly watered as long as the crops such as paddy, sugarcane and turmeric, remain on ground. Bhagayat or garden lands require only occasional wettings and such crops are generally grown under wells.

There are very good irrigational facilities in a major portion of the district which accounts for the prosperity of the district. But in the major portion of Yellareddy, Vellutla and Gandhari circles, the eastern portion of Banswada taluk, which is above the canal and the southern portion of Armoor taluk only small irrigation sources like kuntas exist with the result that there is very little area under cultivation in the tabi season.

The area under different sources of irrigation in 1955-56 is given below :—

Source	*Net area irrigated (in acres)*
Government canals	1,28,606
Private canals	741
Tanks	1,07,449
Tube-wells	470
Other wells	14,776
Other sources	2,340
Total area	2,54,382
Area irrigated more than once	47,677
Gross area irrigated	3,02,059

5. *Cultivation.*—The old customary methods of cultivation are still employed by cultivators in the district, but in general, the technique of agriculture has improved. This improvement is due to the influence of the ryots from the Krishna delta. The Agriculture Department has also played an important role in this development, during the war and postwar periods with the grow more food campaign. Large amounts of 'Taccavi' loans were distributed for the purchase of manure, tractors and oil engines. The big cultivators, particularly in Nizamabad and Bodhan taluks have replaced the wooden ploughs with tractors. Improved strains of paddy and Jowar were evolved in the Rudrur Agricultural Research Station. At present there are 75 tractors and 230 iron ploughs in the district. The Adsali or 18 months' sugarcane crop is grown only in this district in the Andhra Pradesh.

The use of chemical manure, oil cakes and green manures is now the order of the day in the canal area. In the non-perennial zone of the canal, and generally, in perennial zone, the lands are properly manured with farm yard manure and oil cakes. Throughout the district now at least in Abi, the transplantation method is being employed.

The black cotton soil was not considered suitable for wet cultivation, but now this view no longer obtains and a large area has already been brought under sugarcane cultivation and more and more area is being converted into wet. In the black cotton soil areas, where there are no irrgation facilities, only two crops are raised *i.e.*, Rabi and Kharif while in the remaining area there are 4 crops-Abi and Tabi for rice, and kharif and rabi for dry crops.

For wet cultivation under canal or large tanks, the preparation of lands begins even before the monsoons, as soon as the water is let out in the canal. In these lands the transplantation method is adopted and the yield is much more, and less labour is required for weeding. In the non-perennial zone of the canal *i.e.*, in Nizamabad and Armoor taluks, in most of the villages where there is abundant supply of water and cheap labour, transplantation method is adopted on an extensive scale. It is not practised in Kamareddy. But where the water supply is limited, paddy locally known as "Vattivari" is grown under semi dry conditions—by the broadcast method. Such cultivation is in vogue in Kamareddy, part of Armoor, Banswada, Nizamabad and Yellareddy taluks which are above not commandable by the Nizamsagar canal. The japanese method of cultivation is also gaining ground in all the taluks except Kamareddy.

There are 127 different varieties of paddy seeds and 5 strains developed by Agriculture Department are grown in the district. Out of these, about 70% belong to the short duration variety. Only a dozen are common to all taluks.

In the perennial zone of the canal the long duration varieties of paddy seeds such as ‘Akkullu’, ‘Kitchdi samba’, ‘Krishnakatukalu’ etc., are grown. Still there are about 15% of the cultivators of low-income groups, who cultivate the short duration variety, particularly in Tabi season. The short duration varieties are mainly grown in non-perennial zones *i.e.*, in the taluks of Kamareddy, parts of Armoor, Banswada and Nizamabad.

Dry cultivation is not generally undertaken, in proper time, as the cultivators are busy with agricultural operations of the wet crops. The dry lands are not manured and if at all manured, it is with the farmyard manure which is left over after application to wet lands. There is generally no weeding, and if weeding is done it is done only once or twice. In the case of paddy or sugarcane crops weeding is done 3 to 4 times during the season.

Kharif crops of yellow jowar and Bajra and Abi rice ripen by about December and Rabi crops like white jowar, grams and Tabi rice ripen from April to May. Cotton is extensively grown in the black cotton soils. ‘Lakshmi’ variety of cotton is grown in preference to the short staple varieties.

All rice and sugarcane fields are manured. The sugarcane fields are heavily manured. Tabi is a better manured crop. Groundnut cake is used as manure for paddy crop under canal area and liberal quantities of ammonium sulphate and superphosphate are also applied. The practice of raising green manure crop such as sunhemp is also gaining ground.

In the areas adjacent to the forest, which are more backward due to paucity of communications, no other manure except farmyard manure and green leaves are used. Most of the cultivators of the Yellareddy taluk in south-west of Nizamabad taluk, northern portion of Kamareddy, eastern portion of Banswada, and southern portion of Armoor taluks use green leaves from the forest as manure.

The rotation of crops followed is given below :—

Dry. (1) Jowar (Kharif).
Gram (Rabi).
Maize (Kharif).

(2) Horsegram (Kharif).
Jowar (Rabi).

(3) Jowar (Rabi).
Chillies or gram (Rabi).

In wet lands, at times sugarcane and betel vines are sown once in 2 or 3 years. Further rotations practised in the district are :

1. Abi rice—Tabi rice—Abi rice.
2. Abi rice—planted cane—ratoon cane Tabi fallow—Abi rice.
3. Abi rice—Tabi fallow—Abi rice.

The most common rotation in practice in all the taluks is the first mentioned above, but where there is scarcity of water the 3rd kind of rotation is followed. The second method is prevalent in Bodhan taluk due to the location of the biggest sugar factory in the State.

In general, agriculture has progressed on proper lines and the yields are also improving.

Out of total cropped area of the district, the area under food and non-food crops is respectively 89.4% and 10.6%. The main food crops being paddy, jowar and pulses, the area under these crops is respectively 34.8%, 19.5% and 15.4% while the non-food crops like groundnut, gingelly, turmeric and cotton cover respectively under 3.2%, 2.5% 0.4% and 1.3% of the cropped area. Sugarcane is grown on 5.9% of the total cropped area of the district which comes approximately to ¼ of total cropped area in the State under sugarcane.

The percentage of area under Kharif, Rabi, Abi and Tabi crops is respectively, 37.2%, 28.4%, 25.2% and 9.2%. The particulars of land utilisation in 1955-56 are given below :—

		Area in Acres
1.	Total geographical area	19,07,884
2.	Forest	3,59,746
3.	Barren and uncultivable land	1,79,918
4.	Land put to non-agricultural use	1,46,815
5.	Cultivable waste	99,879
6.	Permanent pasture	1,41,262
7.	Land under miscellaneous trees, etc.	17,433
8.	Current fallows	1,93,686
9.	Other fallows	73,528
10.	Net area sown	6,95,617
11.	Area sown more than once	53,962

6. *Cost of Cultivation.*—The chief staple food crops that were considered during various settlements were jowar and paddy for all dry and wet crop cultivations. The cost of cultivation of paddy and jowar per acre is given below :—

	Paddy in Rs.	*Jowar in Rs.*
1. At the initial settlement ..	..	..
2. At the resettlement (1332 F.) ..	14.11	9.76
3. At the present times :—		
(*a*) Collector	203.75	90.00
(*b*) Ryots who have answered the questionnaire ..	210.76	54.00

7. *Prices.*—The prices of the chief produce per rupee at various times have been shown below :—

	Paddy seers per		*Jowar seers per*	
	I.G.	*Rs.*	*I.G.*	*Rs.*
1. At the initial settlements (1306 F.)	32	2/3	29	1/6
2. At the revision settlement (1337 F.)	23	1/3	11	2/3
3. At the present times 1955-56 (according to Bureau of Economics) ..	4	3/4	3	1/4

8. *Yields.*—The yield of chief crops per acre at different periods have been given below :—

Name of the Crop	At the time of initial settlement (seers per acre).*	At the time of revision settlement (Seers per acre)*	PRESENT DAY (SEERS PER ACRE)		
			Director, Bureau of Statistics. †	Officials.‡	Non-officials.‡
1	2	3	4	5	6
Paddy ..	1,336	1,651	670	1,280	987
Jowar ..	..	245	91	..	..

Sources: * Initial and revision settlement reports of Nizamabad taluk.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

†† From the answers to the questionnaire.

9. *Seasonal conditions.*—Owing to the very good irrigation facilities from the Nizamsagar and the Pocharam reservoirs numerous wells and tanks and the large forest area the district has been almost free from famines. There was no famine or scarcity condition in any part of the district during the 20th century. The only famine which occurred dates back to the 19th century. In 1819 while there was famine in Gulberga, Raichur, Bir and Parbhani districts of erstwhile Hyderabad State, only slight distress was experienced in Nizamabad. In the famine year of 1833 though the people were not affected much, large number of cattle died for want of fodder. The great famine of 1899-1900 which was most seriously felt in Aurangabad and Osmanabad, affected this district also in 1899. The rainfall was only 16 inches but as there was a bumper crop in 1898, the ryots did not suffer much. The fodder supply position is also quite satisfactory in the district. On account of development of communications and speedy transport facilities afforded in recent years, there is no likelihood of famines in the district.

The remission of land revenue, sanctioned during last 5 years is as follows :—

Fasli year	*Amount in rupees*
1362	9,15,094
1363	10,91,208
1364	3,90,102
1365	5,29,260
1366	5,12,439

10. *Holdings.*—The total number of holdings in the district is 1,89,281 with an extent of 9,38,853 acres.

11. *Features of settlements and resettlements.*—At the time of initial settlement, the possibility of irrigation under the Nizamsagar project, under execution, had been kept in mind. Therefore, short term settlement guarantee ranging from 7 to 15 years was fixed for the taluks, in the perennial zone of the canal *i.e*,. for Nizamabad, Bodhan and Banswada taluks so that at the end of this period the effect of the Nizamsagar project might be studied and land revenue rates might be revised as the increase in the land revenue was considered inevitable. The taluks however could not be resettled so far.

Sub-grouping was also in practice for dry lands and there were separate assessment rates for Abi, Tabi and Double crop wet lands. The Tabi wet crop was considered as the first crop as the yield had been comparatively more than the Abi crop, under similar circumstances and hence very high assessment rates were sanctioned. But under the revision settlement, these disparities were removed and under certain principles all the lands were uniformally treated. The existing maximum wet rates range from I.G. Rs. 17.14 to I.G. Rs. 12.00, the maximum dry rates from I.G. Rs. 2.67 to I.G. Rs. 1.06, Garden from I.G. Rs. 17.14 to I.G. Rs. 12.00, according to the grouping done for wet and dry. The Adsali or 18 months crop of sugarcane is charged at 3½ times Abi rate or O.S. Rs. 70 per acre and the Eksal sugarcane at 2½ times Abi or O.S. Rs. 50 per acre.

The revision rates of *ex*-jagir villages of the taluk were announced in the years ranging from 1330 fasli to 1359 fasli. Turmeric, irrigated with water from a Government source, is charged 1½ times the Abi rate while for betel vines and bananas under a similar source the charge is two times the normal wet assessment. Chillies, Onions and Tabacco irrigated under Government source, are charged Baghat rates at 2/3 of the Abi rate assessment.

Since 1952 special extra assessment has been imposed in the taluks in which the period of guarantee had expired *i.e.*, in Nizamabad, Armoor, Kamareddy, Bodhan and Banswada taluks at 0-1-0 and 0-2-0 per rupee respectively on wet and dry assessment. Except Yellareddy, all taluks are now due for second revision.

The average rates for dry, wet and Baghat lands as worked out as per soil classification obtaining in 6 taluks of the district are as follows :—

Taluk	Dry I.G. Rs.	Wet I.G. Rs.	Baghat I.G. Rs.
1. Nizamabad	1.14	15.50	11.72
2. Armoor	0.75	16.40	9.33
3. Bodhan	1.14	15.56	11.72
4. Banswada	1.14	15.50	11.72
5. Kamareddy	1.08	15.50	9.56
6. Yellareddy	1.14	15.39	7.77

12. *Abolition of Jagirs.*—There are altogether 291 *ex*-jagir villages in this district which were abolished and taken over by the Government. High rates of assessment are existing in 5 villages of Armoor and 19 villages of Banswada taluk. Action is being taken to remove this disparity of assessment and to bring the rates to the level of adjoining diwani (ryotwari) villages.

WARANGAL DISTRICT

1. *Introduction.*—Warangal district was known in the past as Khammam district. In course of time it assumed the historical name of Warangal which finds its mention in the 'Deccan History' as being the seat of the once flourishing 'Telangana Kingdom'. Its set-up twice met with modifications, once in 1905 and the second in 1953. As a result of the latter change in its composition, five taluks thereof were separated to form into an independent district of Khammam while by adding two taluks of Parkal and Jangaon (from Karimnagar and Nalgonda districts respectively) to the residuary portion of the pre-1953 Warangal district, a compact district of Warangal comprising of six taluks was reconstituted consisting of 1098 villages in all. The district extends over a distance of 96 miles from north to south between latitude 17° 20′ and 18° 37′ and to a length of 120 miles from east to west between longitude 78° 50′ and 80° 42′. It is bounded on the north by Karimnagar district, on the south by Nalgonda district, on the east by Khammam district and on the west by Medak district covering an area of 25,42,008 acres (5326 sq. miles) with a population of 13,25,984. The topographical features are the characteristics of a Telangana tract with vast stretches of green vegetation, dense-forests and an abundance of tanks. The district abounds in off-shoots of huge *granite rock* formation dotting the land-scape. Ten miles north-west of Warangal are the Chandragiri hills, and 14 miles west of it the well known iron-hills of Hasanparthi. The country around the town of Hanamkonda, is about 1700 feet above sea level, but the average elevation of the district is only 870 feet. Nearly ¼ area of the district lying to the east of it (falling under Mulug, Narsampet and Mahboobabad taluks) is over-grown with contiguous thick forests which are resplendent with Teak, Ebony and teems with wild life. It is studded with chains of hills here and there which have helped to form three natural bunds for the three famous lakes of Lakhnavaram, Pakhal and Ghanpur. The Godavari river skirts the district on the north-east and then forms a natural border between Warangal and East Godavari districts. Besides, there are numerous small streams. The Lakhnavaram rivulet is a tributary of the Godavari and the Pakhal stream later called Wyra river empties itself in the Krishna river after passing through Mahaboobabad and Khammam Taluks. Jangaon taluk has got two small streams whose waters are being utilised for irrigation purposes.

The Secunderabad-Bezwada section of the Central Railway runs through this district for a distance of about 96 miles. This line, branches off at Kazipet junction to connect the northern states right up to Delhi. There are in all 7 regulated markets in the district, 2 in Warangal, one in Mahaboobabad, 3 in Jangaon and one in Mulug taluk.

2. *Soil.*—The soil of the district is generally of an inferior quality known as Chalka in which only Karif crops can be grown with success. It forms about 58% of the entire cultivated area. In the low lands, where rich soil surface happens to be deposited, rice is grown. Chalka lands are more common in Warangal, Parkal and Jangaon (Cherial) taluks with a sprinkling of Regad. The 13 villages situated to the north-east of the district along-side the banks of Godavari, contain very fertile alluvial soil which is very suitable for growing Virginia Tobacco.

3. *Climate and Rainfall.*—The climate of the district is dry and generally healthy except during the rainy season. From February till the beginning of the rains, the climate is generally good. It is excessively hot in summer and the temperature rises to 112 degrees F. in the month of May. Some of the interior areas, which are over-grown with thick-forests, had been malarial in the past, but the Public Health Department has brought malaria under control by adopting anti-malarial measures. The annual rainfall of the district is 45.8 inches. In Parkal, Narsampet and Mulug taluks the rainfall is comparatively high as these taluks contain large areas of forests. The remaining taluks however, get comparatively less rain. Long breaks during monsoon, though rare, tend to affect the wet crops while (excessive rainfall) also proves injurious to the dry crops. More than half the annual rainfall is received generally from the south-west monsoon during the months of June to September which is common for the whole State.

4. *Cultivation.*—The table below shows the land utilization in the district :

	Particulars	*Area in acres*
1.	Total geographical area	25,42,008
2.	Area of forests	3,25,387
3.	Barren and uncultivable land	2,72,345
4.	Land put to non-agricultural uses ..	1,53,362
5.	Cultivable waste	81,401
6.	Permanent pastures	2,20,823
7.	Land under miscellaneous trees, etc. ..	26,302
8.	Current fallows	2,60,869
9.	Other fallow land	81,216
10.	Net area sown	11,20,304
11.	Area sown more than once	72,232
12.	Total cropped area	11,92,536

At the time of initial settlement in most of the taluks cultivation of black soils was neglected, as most of the ryots preferred soils which required little labour and even when the pressure on land increased the ryots did not take to the cultivation of black soils with zest. The forests in this district have been reserved as game preserve. However, where more extension is required for tillage, the cultivator shirked from it as being unequal to it. Now in these black cotton soils, crop rotation is practised by alternating kharif jowar with the oil-seeds such as groundnut. The chalka lands are usually allowed to remain fallow for a season or two after two successive crops are grown thereon. Paddy is raised either by broadcasting or by transplantation. The latter method is gradually becoming popular since it gives a better yield without much risk of failure.

Generally the ploughing is done with bullocks and the wooden plough The number of existing ploughs and plough-cattle work out to 151 and 248 respectively for 1,000 acres of cultivated area.

The total cropped area in 1955-56 was 11,92,536 acres out of which about 79.2% area was under food crops. Among principal food crops, jowar and paddy are important under which about 28.5% and 22.2% of the area was cultivated respectively, while the area under pulses was 14.9%. Among non-food crops, the principal oil seeds are groundnut, castor and gingelly under which 13.6%, 3.5% and 1.8% area was sown respectively. The areas under tobacco and cotton were 0.6% and 0.3% respectively. Agricultural labour is normally available throughout the district. The depressed classes supply most of the labour. The total cattle wealth of the district is 7,85,460 out of which 35% are used in agricultural work while 13.6% are milch animals. The average maximum and minimum prices of agricultural lands worked out from the sale-deed figures from 1947 to 1954 are shown below :

	Maximum	*Minimum*
Dry	384 13 0 per acre	34 10 0 per acre
Wet	1,317 2 0 „	117 0 0 „ (1954)

5. *Irrigation.*—The sources of irrigation in the district are tanks, kuntas, projects, rivers, upalvat bonda, mote, yatam, Koles, Guda and Wells. The tanks and kuntas irrigate more than 50% of the total irrigated area.

There are 1,225, 725 and 360 tanks having an ayacut below 10, 20 and 30 acres respectively. Most of them are not in good condition. An area of 30,693 acres is irrigated under these sources and the revenue derived is Rs. 2,88,822.78 nP. There are also spring channels *i.e.* ‘ Parre Kalvas ’ in Warangal and Jangaon taluks under rivers which irrigate 642 acres and 24 guntas. Besides, there are 7 projects in the district (two projects in Jangaon taluk had been restored in 1950) the details of which are given below:—

The Arjunapatla project which was estimated to irrigate 1313 acres and 30 guntas, has irrigated only 340 acres in Abi and 218 acres in Tabi in 1956-57. Besides, this area has not been transferred to wet by settlement department. Under Peddacheruvu, the ayacut is not settled. For the present, approximately 200 acres are irrigated. The Bheemganpur project of Parkal taluk is not settled and assessment is being collected at a flat rate of Rs. 6 per acre (under sivai jamabandi head). If the forest area is cleared and channels are repaired, there is a possibility of irrigating 2,000 acres. Under Pakhal project in Narasampet taluk, an area of 2600.32 acres remained uncultivated due to high level of the land, situated at tail-end of the ayacut, and consequent inadequate supply and want of interest on the part of the cultivators. In Mulug taluk there are 3 projects named Ramappa, Lakhnavaram and Ghanpur. There is scope under Lakhnavaram project, for bringing under cultivation an additional area of 2,000 acres of land belonging to Government. The sources of water supply and area irrigated therefrom in the district are given below :

	Source	*Area irrigated in Acs.*
1.	Government canals	14,393
2.	Private canals	786
3.	Tanks	1,99,786
4.	Tube wells	769
5.	Other wells	41,068
6.	Other sources	2,601
7.	Total net area irrigated	2,59,403
8.	Area irrigated more than once	44,434
9.	Gross area irrigated..	3,03,837

6. *Cost of Cultivation.*—At the time of initial and revision settlements the principal food crops of paddy and jowar were generally considered as representative crops for all dry and irrigated wet lands for which average cost of cultivation per acre was

worked out. The cost of cultivation for paddy and jowar in various settlements and latest figures are as given below :—

Cultivation expenses per acre

Name of the crop	At the time of initial settlement*	At the time of revision settlemen	Present day
(1)	(3)	(3)	(4)
Paddy	..I.G. Rs. 10.81	I.G.Rs. 14.29	Rs. 266.68 by the Director of Agriculture. Rs. 209.51 by 6 officials. Rs. 130.49 by 7 non-officials.
Jowar	..I.G. Rs. 5.34	I.G.Rs. 9.73	Rs. 95.18 by the Director of Agriculture. Rs. 68.00 by 4 officials. Rs. 146.83 by 2 non-officials.

SOURCE: *Initial settlement report of Mahaboobabad taluk.

7. *Prices.*—The prices of principal food crops of jowar and paddy at the various settlements are given below with the present day rates for comparison.

PRICES

Name of crop	At the time of initial settlement (seers per I.G. rupee)*	At the time of revision settlement (seers per I.G. rupee)	Present day (seers per I.G. rupee)†
Paddy ..	34½	21	5
Jowar ..	35	15	5½

SOURCE :* Initial settlement report of Warangal taluk.
† Statistical Abstract of 1955-56.

8. *Yield.*—The yield of jowar and paddy in different settlement periods with the present-day-yield figures are given below :

[*Statement*

YIELDS

Name of the crop	At the time of initial settlement (Seers per acre).*	At the time of revision settlement (Seers per acre).*	PRESENT DAY (Seers per acre)		
			Director, Bureau of Statistics †	Officials ††	Non-officials ††
1	2	3	4	5	6
Paddy ..	1,120	1,103	380	1,076	1,025
Jowar ..	448	242	167	250	531

Sources: *Initial and revision settlement reports of Warangal taluk.

† From Statistical Abstract 1955-56 on the basis of random sampling method adopted.

††From the answers to the questionnaires.

9. *Seasonal conditions.*—During the past 10 years, there was no famine in any taluk nor even scarcity conditions. On account of excessive rains or plant-diseases, the crops failed occasionally but these did not lead to any famine or scarcity conditions. However, for all such crop-failures remissions or suspensions were invariably granted to the affected ryots. Likewise, fodder scarcity was also never experienced at any place during the last decade. The particulars of remissions granted during the last 4 years are given below :

Fasli	*Amount* Rs.
1363 ..	.. 4,30,510
1364 ..	.. 7,46,633
1365 ..	.. 6,25,363
1366 ..	.. 5,10,797

10. *Holdings.*—The total number of holdings of the district are 2,17,401 with an extent of 18,11,303 acres.

11. *Features of original settlement.*—Initial settlement of this district was done in the year 1888 but the announcement of the rates were made in different years from 1895 to 1904. In the past, the survey operations were confined only to the diwani villages. The settlement particulars of each taluk are given below :—

(*a*) *Warangal taluk.*—Initial settlement of this taluk was announced in the year of 1304 fasli (1895). The taluk had two groups in dry assessment and 3 groups in wet assessment. The following were the maximum rates.

		O.S. Rs.			I.G. Rs.
Dry	I Group	2	0	0	1.72 nP.
	II ,,	1	0	0	0.86 ,,
Wet	I ,,	16	0	0	13.72 ,,
	II ,,	14	0	0	12.00 ,,
	III ,,	12	0	0	10.28 ,,

(*b*) *Jangaon taluk.*—It was formerly known as Cherial. The initial settlement of this taluk was announced in the year 1306 fasli (1897). The taluk had two groups for dry and wet assessment, besides one group for garden (lift) and another for garden (flow).

		O.S. Rs.			I.G. Rs.
Dry	I Group	2	8	0	2.14 nP.
	II ,,	2	0	0	1.72 ,,
Wet	I ,,	18	0	0	15.42 ,,
	II ,,	16	0	0	13.72 ,,
Garden (lift) ,,		6	0	0	5.14 ,,
,, (flow) ,,		10	0	0	8.56 ,,

(*c*) *Parkal taluk.*—This taluk was formerly attached to Karimnagar district. The initial settlement of the taluk was conducted in the year 1307 Fasli (1898). The taluk then had three groups for dry assessment, 4 groups for wet assessments, one group for garden (lift) and another for garden (flow). The following maximum rates were announced :—

		O.S. Rs.			I.G. Rs.
Dry	I Group	2	0	0	1.72 nP.
	II ,,	1	8	0	1.28 ,,
	III ,,	1	0	0	0.86 ,,
Wet	Spl. ,,	17	0	0	14.56 ,,
	I ,,	15	0	0	12.86 ,,
	II ,,	13	0	0	11.14 ,,
	III ,,	10	0	0	8.56 ,,
Garden (lift) ,,		6	0	0	5.14 ,,
,, (flow) ,,		10	0	0	8.56 ,,

(*d*) *Mahboobabad taluk.*—It was formerly known as 'Manukota'. The initial settlement of this taluk was conducted in

1309 fasli (1900 A.D.) The taluk had 2 groups in dry and two for twe assessments. The following maximum rates were announced.

			O.S. Rs.			I.G. Rs.
Dry	I	Group	2	0	0	1.72 nP
	II	,,	1	10	0	1.39 ,,
Wet	I	,,	15	0	0	12.86 ,,
	II	,,	12	0	0	10.28 ,,

(*e*) *Narsampet taluk.*—This taluk is commonly known as Pakhal. Its initial settlement was completed and announced in 1313 fasli (1904 A.D.) for a term of 15 years. The taluk had two groups for dry and 2 for wet assessment and one group for garden (lift) and another garden (flow). The following maximum rates were announced :—

			O.S. Rs.			I.G. Rs.
Dry	I	Group	1	8	0	1.28 nP.
	II	,,	1	4	0	1.06 ,,
Wet	I	,,	12	0	0	10.28 ,,
	II	,,	10	0	0	8.56 ,,
Garden	(lift)	,,	6	0	0	5.14 ,,
,,	(flow)	,,	10	0	0	8.56 ,,

(*f*) *Mulug taluk.*—Mulug is said to have been surveyed and settled in 1306 fasli (1897 A.D.) This taluk was formed in 1905 by taking over a number of villages from each of the taluks of Parkal and Narsampet. Hence, the year of announcement of the component villages will have to be deemed to correspond with that of the respective taluks to which they belonged previously. The taluk had 3 groups for dry assessment, 2 groups for wet assessment and one group for garden (lift). The maximum rates were as follows :—

			O.S. Rs.			I.G. Rs.
Dry	I	Group	1	8	0	1.28 nP.
	II	,,	1	4	0	1.06 ,,
	III	,,	1	0	0	0.86 ,,
Wet	I	,,	12	0	0	10.28 ,,
	II	,,	10	0	0	8.56 ,,
Garden	(lift)	,,	6	0	0	5.14 ,,

12. *Features of revision settlement.*—After the expiry of the initial settlement periods, the 1st revision settlement was completed in respect of each taluk as follows :—

(*a*) *Warangal taluk.*—The taluk consists of 213 villages including 3 villages transferred from Jangaon consequent upon its revised set up. The 1st revision settlement of this taluk was completed in 1332 fasli (1923 A.D.). The taluk had 3 revision groups each under dry and wet, one group each for garden (lift), garden (flow) and for combined sources. The following maximum rates were announced :—

		O.S. Rs.	I.G. Rs.
Dry	I Group	2 12 0	2.36
	II „	2 6 0	2.03
	III „	2 0 0	1.72
Wet	I „	18 0 0	15.42
	II „	16 0 0	13.72
	III „	14 0 0	12.00
Garden (lift) „		6 0 0	5.14
„ (flow) „		10 0 0	8.56
Combined source „		10 0 0	8.56

The term of revision too expired in 1361 fasli (1952).

(*b*) *Jangaon taluk.*—There are altogether 187 villages including 4 deserted villages in its present set up. During the process of its reconstitution, some of its villages were transferred to other taluks while a few villages pertaining to other taluks were added to it. The term of settlement was for 30 years which expired in the year in 1336 fasli (1927) and revision settlement came into force in the same year. In the resettlement, 3 groups for dry, 3 for wet assessment, one for garden (lift) and one for garden (flow) were fixed. The following revised maximum rates were announced :

		O.S. Rs.	I.G. Rs.
Dry	1st Group	2 12 0	2.36
	2nd „	2 8 0	2.14
	3rd „	2 0 0	1.72
Wet.	1st Group	20 0 0	17.14
	2nd „	18 0 0	15.42
	3rd „	16 0 0	13.72
Garden (lift) „		7 0 0	6.00
„ (flow) „		10 0 0	8.56

The revision period of this taluk also expired in 1365 F. (1956).

(*c*) *Parkal taluk.*—The taluk was revised in 1330 fasli (1921). In the revision set up of the taluk, 18 villages of Manthani and 4 villages of Narsampet have been transferred to this taluk. In all, the taluk consists of 131 villages. The taluk has 3 groups each under dry and wet and one group for garden (lift) and another for garden (flow); the following were the rates announced:

			O.S. Rs.	I.G. Rs.
Dry	1st Group	..	2 12 0	2.36
	2nd ,,	..	2 0 0	1.72
	3rd ,,	..	1 6 0	1.17
Wet	1st ,,	..	16 0 0	13.72
	2nd ,,	..	14 0 0	12.00
	3rd ,,	..	12 0 0	10.28
Garden	(lift) ,,	..	7 0 0	6.00
,,	(flow) ,,	..	10 0 0	8.56

The term of revision was for 30 years which also expired in 1359 fasli (1950).

(*d*) *Mahboobabad taluk*.—50 villages of this taluk have been given over to Khammam and Yellandu taluks of Khammam districts, while two villages of Khammam were taken over to this taluk. Now there are 154 villages in the taluk out of which 6 are deserted ones. As per the revision settlement in 1331 fasli (1952) the taluk had 2 groups for dry assessment, and 3 groups for wet assessment, one group for garden (lift), garden (flow) and for combined sources. The following maximum rates were announced:—

			O.S. Rs.	I.G. Rs.
Dry.	1st Group	..	2 4 0	1.92
	2nd ,,	..	1 14 0	1.61
Wet.	1st ,,	..	16 0 0	13.72
	2nd ,,	..	14 0 0	12.00
	3rd ,,	..	12 0 0	10.28
Garden	(lift) ,,	..	6 0 0	5.14
,,	(flow),,	..	10 0 0	8.56
Combined source	,,	..	10 0 0	8.56

The period of revision also expired in 1360 F. (1951).

(*e*) *Narsampet taluk*.—This taluk comprises of 195 villages. The revision was due in 1327 fasli (1918) but it was started rather late probably because of the unfavourable economic conditions obtaining in this taluk. It was, however, partially announced in the year 1349 falsi (1940) leaving the rest of the taluk unannounced for reasons which could not be ascertained. Consequently enhanced rates are prevalent in a portion of the taluk, while in the rest of the taluk the same old assessment rates are operating. The latter type of villages are subject to the Special Assessment of annas 2 and anna one per rupee on the dry and the wet lands respectively.

(*f*) *Mulug taluk*.—The taluk is said to have been under the process of revision till 1955. As most of its area consists of forests, its theodalite survey work had to be completed before taking up its revision on hand. For various handicaps such as non-availability of hands etc., the revision had to be prolonged for quite a long period. At the revision set up, 23 villages of *ex*-zamindari of Palwancha taluk were transferred to this taluk. These villages comprised 6 khalsa and 17 *ex*-jagir villages which were, however, surveyed and settled by the Settlement Department itself. The announcement for these villages also was made in 1950 and the period of their settlement was to coincide with that of the taluk which, as a matter of fact, had already expired in 1943. The taluk now consists of 218 villages including 72 deserted ones.

On the whole the entire district of Warangal was ripe for 2nd revision due to the expiry of the settlement periods prescribed for each taluk. Recently, the revision survey operations have been finalized in respect of Mulug and Parkal taluks. Revision survey of Warangal taluk was also taken up in 1955 but was given up subsequently.

13. *Estates Abolition.*—After the abolition of jagirs, their settlement was taken up. But many *ex*-jagir villages were treated as independent units leaving the jagir assessments untouched, while in quite a number of cases such *ex*-jagir villages were subjected to the rates of the group in which they were locally situated. With the result different rates of assessment are in force in different villages of the taluks at present.

CHAPTER V

Methods of Irrigation in Andhra Region

(1) Irrigation systems in India are probably as ancient as in Egypt. Large scale reserviors and irrigation canals were constructed in India many years prior to the Christian era. By 300 B.C. India had developed irrigation to such an extent, that reports on the advantages of growing two crops on irrigated lands became a part of the recorded history.

(2) The rainfall over the greater part of South India is unevenly distributed often resulting in serious deficiency or total failure of supply of water for irrigation. In the Andhra region, as elsewhere in South India, agriculture is in most areas a gamble in the rain. Crop production cannot be assured without adequate artificial facilities to supplement the rain for irrigation, dependable water supply being one of the important factors that contributes to the efficiency of agriculture.

(3) India in general and Andhra in particular owes in a great measure to the former princes and rulers, for the inception of the present unrivalled system of Irrigation Works. In Andhra, wet cultivation is carried on, largely by means of artificial irrigation, the water for this purpose being obtained either through channels taking off from rivers or through tanks or reservoirs impounding the surface flow of rains. The works of this description have been in existence from very remote times, as the value of irrigation in increasing the yield from the soil, was recognised long ago. History has recorded, that during the III dynasty of Vizianagar Empire, the State had a clear-cut irrigation policy. The Emperors of Vizianagar took considerable interest in improving irrigation works.

4. Irrigation works in Andhra can be divided into two main classes—(1) those which are provided with artificial storage and (2) those which are dependant throughout the year on the natural supplies of the rivers. We find mostly non-storage systems in Andhra. The non-storage canals can be divided into perennial and inundation canals. Perennial canals obtain their supplies, irrespective of the level of water in the river, by means of some obstruction, placed in the bed of the river to raise the height of the water to the required level. The obstruction placed, usually, would be in the form of a weir or barrage fitted with shutters and sluices, to allow the excess water to escape down the river. The supplies to inundation canals, naturally, fluctuate with the water level in the river and irrigation under these canals is mainly dependant upon the seasonal conditions. The system of storing water in the monsoon for utilisation during the dry weather period has been in vogue since early times. Such storage works consist of an earthen embankment constructed across a valley through which a stream runs, carrying the rain water. The big tanks like Lingamparthi tank in East Godavari, Singanamala, Anantapur, Bukkapatnam, Gooty, Dharmavaram tanks in Anantapur district; Atmakur and Anantasagaram in Nellore and Rayalcheruvu in Chittoor district, were constructed by enclosing the valleys with earthen embankment and making use of the hills on either side as natural bunds.

N.B.—'Tirwajasti', 'Water Cess' and 'Water rate' are used in this chapter to mean the charge for irrigating a crop other than dufasil, on dry lands.

5. Irrigation works are further divided into, Productive and Protective. Productive works are those which yield revenue, sufficient to cover working expenses and interest charges on the capital outlay. Protective works are those which do not get an adequate return but are constructed in order to protect precarious tracts from famines and the vagaries of the monsoon. The distinction between the Productive and Protective works has, however, largely disappeared now. The irrigation projects are now being taken up, more from the point of view of the welfare, the schemes help to create, than from the prospects of immediate cash returns to the Government. Irrigation projects are now generally classed as, major projects, medium projects and minor works.

6. *Important irrigation systems in Andhra.*—The most important irrigation systems in Andhra are the Godavari Delta System and the Krishna Delta System. The Godavari river drains about 1,15,000 sq. miles and carries as much as one and a half million cubic feet of water per second in high floods. The Godavari anicut system consists of an anicut and three main canals irrigating three deltas. The anicut is in four sections linking the islands in the broad river, the Dowleswaram section 4,839 feet long, the Ralli section 2,859 feet long, the Maddur section 1,550 feet long and the Vazeswaram section 2,601 feet long. The headworks of the canals consist of a head sluice and another sluice and a head-lock for each of the three deltas. The anicuts are monumental works which show the genius, keenness and intrepidity of Sir Arthur Cotton, the originator of the Godavari scheme. These monumental works secure copious supply of precious water to the ryots in Godavari delta. The ryots have erected statues at Dowleswaram, Bobbarlanka and and Chettipeta to commemorate the memory of Sri Arthur Cotton.

7. The eastern delta is about 450 sq. miles, the central delta is about 500 sq. miles while the western delta is about 1,000 sq. miles, in extent, stretching down to the Collair lake. In the eastern and western deltas, the Samalkot and Eluru canals define the limits of irrigation to the areas enclosed between them and the Bay of Bengal. They also form the link between Kakinada port and Eluru town where the (Krishna) Eluru canal of the Krishna delta system joins the (Godavari) Eluru canal. The central delta particularly the "Nagaram" island is the "Garden of the Godavari District" and is noted for the Gannavaram aqueduct which was completed in about eight months in the fifties of the last century, a remarkable feat of Captain Orr. The Polavaram aqueduct at Annampalle is a similar recent construction to irrigate Polavaram island in the central delta. The system consists of a canal

of the Godavari central delta, about half a mile above Annampalle lock, which is taken across the Vriddha Gowtami, by a masonry aqueduct and irrigates the Polavaram island. The river and its branches are banked, throughout, to protect the deltas from floods. Approximately one million acres are irrigated by the network of canals and channels which are thousands of miles long. Those who have local knowledge will certainly appreciate the benefits of irrigation derived on account of the construction of the Godavari anicut. By means of Godavari and Krishna canals and Buckingham canal, one can go, by boat, from Madras to Kakinada, a distance of 400 miles and from Rajahmundry one can continue the journey by boat beyond Bhadrachalam right up to Sirvoncha in the old Madhya Pradesh but now in the Bombay State, a further distance of 188 miles. The canals are therefore not only useful for irrigation but also for navigation, which provides a cheap means of transport for the crops produced. About 400 miles of canals are navigable and a major part of the exports and imports from and into the delta, is conveyed by boats. This network of navigable canals has helped a great deal to build up the prosperity of the Godavari and Krishna ryots. The network of canals are navigable throughout their length for 11 months in the year and carry annually cargo valued about Rs. 25 crores besides timber worth about Rs. 3 crores and over a million passengers a year. The capital outlay on the system is about Rs. 2.20 crores and the return is 18.22 per cent.

8. Next, we come to the Krishna delta. The river Krishna rises near Mahabaleswar in the Western Ghats, 4,000 feet above the sea level and runs southwards through the Bombay State for some distance, before it turns east into Hyderabad and receives the Bhima. Running through the Sholapur and Raichur 'Doabs', it passes Srisailam where it is known as "Pathala Ganga". The river Tungabhadra joins the Krishna at Sangameswar near Kurnool. From Srisailam, the river flows through the valley of the Nallamalai Hills passes by Nagarjunakonda and Elleswaram and Nandikonda village near the site of the Nagarjunasagar dam and running further east passes by Mukthyal, Dhanyakataka (now Amaravathi), the ancient Andhra capital, Vijayawada and after flowing another 40 miles east falls in the Bay of Bengal. The river, after flowing through a narrow gorge in the Nallamalais enters the plains of the Coramandal Coast, studded with hills. The last of these three hills is at Vijayawada where the river flows between two of them, hardly 6 furlongs apart. Stretching away on both sides of the river beyond Vijayawada lie the two sections of the delta, the eastern delta lying on the left side and the western delta lying on the right. For 40 miles below, the river runs in a single stream. It then throws out the Puligedda branch. Between this and the main river lies the Divi island. The main river then flows fifteen miles and splits into

three branches before it empties into the sea. The river drains 97,000 sq. miles and its flood discharge is about a million cubic feet per second. Sir Arthur Cotton who built the Godavari Anicut was again responsible for the construction of the Krishna anicut at Vijayawada in 1855 with its two canals supplying the two sections of the delta on either bank of the river. The eastern delta has an area of about 1,160 sq. miles and stretches as far north as the Collair. The western delta is about 950 sq. miles and extends to the south as far as Thimmasamudram in Guntur District. The Krishna-Eluru Canal in the eastern delta connects the Godavari river canal in the north and the Commamur canal of the western delta and joins the Buckingham canal in the south. These contour canals and the interior canals form a network of irrigation and navigation canals affording irrigation and transport for the two deltas. The Divi island was irrigated with water pumped from the river by diesel-engine-driven pumps. Pumping from the river was carried on till 1935 when the "Campbell aqueduct" was built at Puligedda to carry the Krishna east bank canal across the river to Divi. The canal now irrigates by direct flow, the entire ayacut in the Divi island. The "Campbell aqueduct" at Puligedda is the longest reinforced concrete aqueduct bridge in India and carries a roadway 16 feet wide and a footpath 4 feet wide. The river and its arms forming the Divi island are banked to protect the island from floods. The canals are navigable for about 10 months in the year and carry annually cargo valued about Rs. 17 crores, timber worth about Rs. 45 lakhs and over two lakhs of passengers. The system irrigates more than ten lakhs of acres. The value of the crops grown is about 12 crores. The capital expenditure is Rs. 2.28 crores and the return is 16.20 per cent. The Krishna anicut suffered serious damage during the floods of 1952. In order to replace the dilapidated anicut, the Prakasam Barrage on the Krishna river, at Vijayawada, was constructed, in 1958, as a spill over scheme of the First Five-Year Plan. The Prakasam barrage assures supply of water to the Krishna delta and will also incidentally help to bring in an additional ayacut of 54,000 acres in Guntur district and 4,600 acres in Krishna district.

9. The Godavari and Krishna projects are the most beneficial and most successful irrigation schemes in Andhra. These projects have improved the condition of the people beyond the expectations of the originator. These two projects are productive works, in the true sense of the term.

10. The other important irrigation systems are described below :—

In the extreme north of the State, we have the Bahuda river and Padmapuram gedda irrigating an extent of 6,000 acres. Next there is the Srikakulam minor rivers system comprising a number of channels taking off from the rivers, the Vamsadhara and Garibulagedda, irrigating about 67,000 acres. By means of a regulator across the river Nagavali at Thotapalli, sufficient water is diverted to a main canal and its branch channel to irrigate roughly 28,000 acres. This project was completed in 1909 and it has conferred great benefit to the ryots. We have, in the southern portion of the Visakhapatnam district, a number of channels taking off from the Champavathi, Gosthani, Sarada, Varaha and Tandava rivers. These systems irrigate roughly about a lakh of acres.

11. Coming down to Nellore, we meet a dry and barren district, but advantage has been taken of such facilities as exist for extending irrigation. Excellent crops are grown near the sea coast where the rainfall is generally favourable and with the addition of some extra water supplied by means of irrigation from tanks and canals. In the Nellore district, the river Pennar has been harnessed for irrigation. Two anicuts have been constructed one at 'Sangham' and the other at Nellore to divert the water of Pennar river to the Kanigiri and Sarvepalle reservoirs and about 1,65,000 acres of paddy is cultivated under them annually. Further inland, the Mopad reservoir built in 1921 on Manneru river, as a famine protective work has largely fulfilled the purpose for which it was intended and irrigates about 7,000 acres.

12. We shall now divert our attention to the west and northwest to have a glimpse at Rayalaseema comprising Chittoor, Cuddapah, Kurnool and Anantapur districts. These are in the famine zone and are periodically liable to failure of rain and consequent drought. The normal rainfall varies from 20 to 30 inches.

13. The country is rocky and irrigation is very difficult. Irrigation schemes in Rayalaseema depending on local rains are of doubtful utility. The only hope of Rayalaseema is the river Tungabhadra and to develop irrigation in the Rayalaseema districts a project has been constructed at Mallapuram, near Hospet. About 2,50,000 acres is expected to be irrigated under this project. The spectre of famine in the Rayalaseema districts will vanish in spite of the general deficiency of rainfall. The main source of irrigation at present is the Kurnool-Cuddapah Canal taking off from the Thungabhadra near Sunkesula about 15 miles upstream of Kurnool. The canal which flows through a black cotton belt has not been as successful, as hoped for though in years of deficient rainfall, its water is eagerly sought by ryots, for occasional irrigation of their crops. The ryots have the option of taking or refusing water under this canal.

14. Some of the projects which have been recently completed and which are still in progress are described below:—

Gambhiramgedda Reservior in Visakhapatnam district is another important medium size project, the construction of which has just been completed. The anticipated ayacut is 1,509 acres, but water can be made available for 600 acres only, as it has also to supply drinking water to the Visakhapatnam Municipality.

Vegavathi anicut scheme, Seethanagaram anicut scheme and Narayanapuram anicut scheme are other important schemes in Srikakulam district. All these schemes are still under execution and they are likely to benefit an additional area of 13,020 acres besides stabilising the existing ayacut of acres 33,338. In West Godavari district, the scheme for remodelling the Bandakatta channel system under the existing anicut across Byneru river at mile 23/2 has been completed and the entire ayacut of 3,652 acres has been developed. Another important project in Guntur district is the Romperu project. This project is mainly intended to improve Romperu drain and allied drains *viz*., Perali and Kunderu with a view to ensure speedy discharge of floods and incidentally to release a long belt of 4½ furlongs width, for wet cultivation. The entire ayacut of 8,196 acres under the Romperu project has been developed. The total extent of the ayacut expected to be benefited by 1958-59 is 9,000 acres. The Rallapad project in Nellore district consists of a reservoir across Manneru in Veeraraghavuni Kota. It is still under execution. Ultimately 8,175 acres will be benefited. Nakkalagandi reservoir scheme, Paleru reservoir scheme and Upputeru lower anicut scheme are the other important schemes in Nellore district. All these works have been completed. The total area which will be benefited is about 4,320 acres under these schemes. Upper Pennar Project in Anantapur district was commenced in 1951 and the reservoir has been completed. The anticipated ayacut under this project is 9,781.70 acres. The work on Bhairavanithippa project is in progress. The anticipated ayacut is 9,700 acres. Though the project is expected to be completed by 1960, water will be let out for the second crop season from this year. Chennarayaswami Gudi tank and Vidyaranyaswami tank are some other irrigation schemes in Anantapur district. About 1,325 acres are expected to be benefited by these schemes. The lower Sagileru Project in Cuddapah district will benefit an additional area of 2,847 acres but this project has not yet come into commission. The total area to be benefited by the Pincha Reservoir Project in the same district is 3,880 acres. This project is still under construction. The Siddalagandi Project, Mallimadugu Reservoir and Kalangi Reservior schemes in Chittoor district are other important schemes and they have been completed. In the case of most of these new projects the Government have fixed the water rate to be levied at Rs. 15 per acre.

15. *Productive irrigation works.*—The productive irrigation works in Andhra are (*i*) the Godavari delta system in East and West Godavari districts, (*ii*) the Cumbum tank system in Kurnool, (*iii*) Krishna delta system in West Godavari, Krishna and Guntur, (*iv*) the Divi-cum-Krishna east bank canal system in Krishna, (*v*) the Polavaram island system in East Godavari and (*vi*) the Ponnai anicut system in Chittoor district.

16. *Unproductive irrigation system.*—The Unproductive or the protective irrigation works in Andhra are (1) the K.C. Canal in Cuddapah and Kurnool districts, (2) the Srikakulam minor rivers system in Srikakulam and Visakhapatnam districts, (3) the Muniyeru system in Krishna district, (4) the Dondapadu tank in Guntur district, (5) the Yeruru tank in Nellore district, (6) the Sagileru system in Cuddapah district, (7) the Atmakur and Jangamaheswarapuram tanks in Guntur district, (8) the Anamasamudram-Beraperu tank, the Hajipuram tank and the Ponnaloor tank in Nellore district, (9) the Markapur tank, the Venkatapuram tank, the Siddapur tank, the Tippaipalem Project in Kurnool district, (10) the Nagavali river system in Srikakulam district, (11) the Bhavanasi tank in Guntur district, (12) the Yellanur tank in Anantapur district, (13) the Nagavaram anicut and supply channel in Cuddapah district, (14) the Mopad reservoir system in Nellore district, (15) the Pennar river canals, (16) the Chepad channel and (17) the Tungabhadra Project low level canal.

17. There are thousands of Minor Irrigation Works with ayacuts of 200 acres and less each in Andhra and they are pockets of insurance against famine. These minor works include tanks, private channels and other sources like spring channels, wells etc. The importance of minor works is not often recognised because they are small in size and scattered all over the country side, and are not spectacular like the huge reservoir or anicut systems. They are generally found in the dry upland districts where, but for them, the crops would be entirely dependent on the capricious rainfall. They irrigate annually an area very nearly equal to that irrigated by the major river systems. (*Vide* Appendix-16.)

18. Tank irrigation plays a very important part in the State. There is a wide diversity in the storage capacity of the tanks. There are tanks which are fed by river systems irrigating thousands of acres and small kuntas which irrigate only a few acres. The emperors of Vizianagaram encouraged the construction of tanks by making special grants. The tanks are the most important sources of irrigation under minor works. There are 25,547 tanks in Andhra. The largest number of tanks is found in Srikakulam and Chittoor districts. There are not many big rivers in these districts, and therefore all the rainfall has to be conserved and utilised through

tanks. Unlike in the larger systems of irrigation, the problem of Minor Irrigation Works is not primarily one of extension and development, but the very urgent one of conservation and maintenance, prevention of retrogression and the restoration of works to a certain minimum standard of efficiency ; for minor irrigation has both a productive as well as a protective value.

19. The protective aspect of minor irrigation was recognized as ealry as 1878 by the Famine Commission, who said that the true value of irrigation works is to be judged by the direct protection afforded by them in years of drought by the saving of human life, by the avoidance of the loss of revenue remitted and of outlay incurred in costly measures of relief.

20. Another important source of irrigation in Andhra are the wells. There are 2,23,957 wells in Andhra. A large number of wells in Andhra are sunk in hard ground with a foundation of rock or in rock itself. In the Deccan black-soil tracts, the water table is very deep and irrigation from wells hardly pays. Water supply at reasonable depth is to some extent available only in the south-east coastal areas. In Andhra, the climate is warm and the sun powerful throughout the year, and frequent waterings are necessary to the fields for the successful protection of summer crops. It does not therefore pay to irrigate from wells, unless a good yield is realised.

21. Lift irrigation and intensive cultivation are the rule, in the dry Rayalaseema districts. The development of well irrigation in Andhra is largely attributed to the liberal policy pursued by the Government, over a century in regard to the exemption of private improvement from additional taxation. Sir Thomas Munroe, first advocated the policy of not assessing to revenue, private wells, as they are treated as an improvement to land by the ryot's personal effort. The result was that orders were issued giving a definite assurance that the ryots would be allowed the full benefit of their own improvements, and that the lands improved would not be subject to any additional assessment so long as the general rates of the district remained unaltered. Another important factor is the availability of oil engines and cheaper hydro-electric power. These have enabled the ryots to deepen the wells to a depth where bullocks cannot ordinarily be used for lifting the water and thereby obtain larger supplies. There are 12,586 pump-sets in Andhra for pumping water for irrigation. There is considerable scope for the extension of well irrigation in Andhra.

22. Wells in the villages account largely for the success of agriculture and the Government have, from time to time, sanctioned subsidies to encourage the sinking of new wells, or the repair of old wells or for deepening them.

23. The development of irrigation in the State is watched by the Irrigation Development Board. All irrigation proposals and projects are examined and discussed by the Irrigation Development Board before they are submitted to the Government.

Para (2) Brief summary of the rules and orders relating to levy of water charges in the districts of Andhra region.

The rules for the levy of wet assessment have been dealt with in detail in Chapter III of this report. In this chapter, the rules for the levy of water cess are dealt with.

2. Water cess is charged, whenever water is taken from a Government source of irrigation, for irrigating dry lands, or for the irrigation of second crop on single crop wet lands. They are (*a*) thirvajasth, *i.e.*, water rate payable for irrigation of lands, classified as dry and (*b*) faslijasthi *i.e.*, water rate payable for irrigation of a second crop, on single crop wet lands.

3. Water rate is levied under the rules made under the Madras Irrigation Cess Act, 1865 whenever water is supplied or used for irrigation from any river or stream etc., belonging to, or constructed by, or on behalf of Government, in accordance with the rules prescribed under the Act. Any rule or notification prescribing water rates under the Act has to be published for eliciting public opinion, before it is finalised. The rules for the levy of water cess are contained in B.S.O. 4 to 7 and the appendices thereto.

4. The principles on which water rates are charged in Andhra are stated below :

(1) *Consolidated wet rate.*—In respect of older works like, Krishna and Godavari systems, the charge for water is consolidated with the land revenue proper and this wet assessment is calculated on the settlement principle of taking a share of the produce. The total receipts of this consolidated wet assessment are separated into shares due to land and water for purpose of accounts only.

(2) *Separate water rate.*—In all cases where water rate is not consolidated with land revenue as stated above, a separate charge for irrigation is made. Such charges for water fall under two heads—(*i*) Differential water rate and (*ii*) Fixed water rate.

(*i*) *Differential water rate.*—This proceeds on the principle that when a dry land is irrigated, the appropriate water-rate is the difference between the wet assessment and the corresponding dry assessment for the same class and sort of land.

(*ii*) *Fixed water rates.*—These rates fall under two heads (*a*) agreement rates under projects and (*b*) flat rates under old works.

(*a*) *Agreement rates.*—These are settled by contract express or implied. The special water rates prescribed under the various projects and the standard scale of water cess in force in Andhra come under this category.

(*b*) *Flat rates under old works and new projects.*—Flat rates are charged on all lands alike, varying only according to the nature and duration of crops and the classification of irrigation sources, but not depending on the nature of soil.

5. *Differential water rate system.*—This system is in force in the districts of Srikakulam (the tract covered by the Nagavali project), Kurnool, Cuddapah, Anantapur (Kadiri Taluk), Chittoor (Vayalpad and Madanapalli taluks) and Nellore, except in the tracts which are covered by the special rates in the projects. The rates of water cess chargeable for the different crops under the differential water rate system are as noted below :

(1) For a single wet crop ..	The difference between wet and the dry rates at which the land is assessed.
(2) For a second or third wet crop.	One half of the charge shown against item (1) plus half the dry assessments.
(3) For a first, second or third dry crop. ..	One-third of the charge shown against item (1).
(4) For sugarcane, betel, plantains and other wet crops which ordinarily remain on the ground for more than six months. ..	The sum of the charge specified against items (1) and (2).
(5) For dry crops which ordinarily remain on the ground for more than six months.	One and a half times the charge shown against item (3).

6. *Fixed water rate system.*—Under the fixed water rate system, water cess is levied at fixed rates on all lands alike, varying only according to the nature and duration of the crops and the classification of the irrigation sources, but not depending on the nature of the soil. The rates charged under the fixed water rate system fall under two categories *viz.*, (1) the rates prescribed under the standard scale of water cess and (2) the special rates prescribed under

various projects. For the purpose of levy of water cess, the irrigation sources are divided into two classes. The irrigation sources placed in the 1st and 2nd class by the settlement department are treated as 1st class and those placed by the settlement department in groups lower than the 2nd, are treated as 2nd class. The rules for the levy of standard scale of water cess on dry lands are given in Appendix 6-A. The rates charged under special projects are furnished in Appendices, 6-B, C and D.

7. *Other rules.*—Where a wet crop is grown so close to a Government source as to raise a reasonable presumption that it obtains water by percolation, a charge under Madras Act VII of 1865 (Irrigation Cess Act) as amended by Act V of 1900 shall be made for such water, unless it is shown that the supply from the Government source has not been beneficial to or sufficient for the requirements of the crop. No water cess will be levied on dry crops, irrigated by percolation, unless owing to drought or other special circumstance, it is manifest that without such irrigation, the lands must have remained waste or the crop must have perished. In cases of doubt no charge should be made. In respect of crops which ordinarily remain on the ground for more than six months, the prescribed water-cess should be charged irrespective of the period for which water is actually taken, provided that water is available in the Government source concerned for a period longer than that required for raising an ordinary paddy crop. This rule will not however apply to casuarina, bamboo and other timber and fuel plantations, the irrigation of which should be charged as for single or dufasal crop according to the number of months during which water is actually taken. The levy of water cess for the irrigation of such plantations is regulated as below :—

(*i*) In tracts where there are different rates for occasional and systematic irrigation, the irrigation of these plantations should be charged as for occasional irrigation.

(*ii*) *Areas in which the standard scale of water rates is in force.*—The charge, appropriate for the irrigation of a first dry crop, should be levied, if water is taken for a period not exceeding six months. If water is taken for a longer period, one and a half times the above charge should be levied.

(*iii*) *Area in which differential water rate system is in force.*—The charges are the same as those prescribed for the irrigation of dry crops, with the modification, that the charge prescribed for the dry crops which ordinarily ramain on the ground for more than six months or which ordinarily require water for more than six months, should be levied, only if water is actually taken for more than six months.

(*iv*) *Area for which special rates for water cess and special rules have been prescribed.*—These areas fall under two classes (*a*) Where a separate charge has been prescribed for dry crops, and (*b*) where provision is made only for a charge on an irrigated crop without any distinction between wet and dry crops. In the areas in class (*a*) the charge for the irrigation of trees grown for fuel or timber should be the same charge as for a first irrigated dry crop, if water is taken for a period not exceeding six months, and one and a half times that rate if water is taken for a longer period. As regards areas in class (*b*) these plantations should be treated as single crop or double crop in accordance with the period for which they actually take water and charged at the rate for a first irrigated crop when water is taken for a period not exceeding six months and at one and a half times that rate when the period exceeds six months. Collectors, Divisional Officers, Tahsildars and Deputy Tahsildars may impose water cess in all cases. They may also sanction the prescribed abatement of charge, when water is raised by mechanical contrivances such as guda or picottas,which is generally one-fourth of the water cess. When portions of a field are irrigated, the charge will be calculated on the actual extent cultivated. However, where the extent is less than 10 cents, the officer charging water cess has the discretion to charge on the actual area or not to charge at all. Where a ryot grows two or more crops of different kinds, liable to different rates of water cess, the charge will be made according to the area under each crop. Unless it is a case of irregular irrigation, no charge will be made for the irrigation of seed-beds. A single crop, though twice cut, will be charged with only one rate of water cess. For instance, if a ryot raised an indigo crop with the aid of Government water and cuts it once in one year and another time in the following year he will be charged with water cess only in one year but not in both the years.

8. *Irregular irrigation.*—Use of water for irrigation is subject to the detailed rules issued in B.S.O. 4 and in the notifications isued in the case of the various projects. Permission to take water is necessary. The officer from whom the sanction is to be obtained will be defined, with reference to local conditions, by the Collector for sources in charge of the Revenue Department and by the Superintending Engineer for sources under the control of the Public Works Department. Irrigation is said to be 'irregular' when water from a Government source or work is taken or used in the following cases, namely:—

(1) When the water is taken or used for any ryotwari or minor inam land registered as wet otherwise than in accordance with the conditions on which it is so registered or recognised; or

(2) When the water is taken or used for any other land otherwise than under and in accordance with the terms of a general or special permit in force issued by a competent authority ; or

(3) When the water is taken or used for any land in a manner involving any unauthorised interference with an irrigation or drainage work, such as crossbunding a channel, making a cut or hole in the bund, opening or breaking a sluice, changing a pipe, or altering the position of a pipe; or

(4) When the water is taken or used for any land in breach of any rules or regulations directing from what source or on what conditions water may be taken to or used for such land.

9. *Irregular irrigation is liable to be penalised as noted below* :—

(*a*) In the areas commanded by the Godavari and Krishna irrigation systems:-

(1) On the first occasion	.. Three times the normal water cess
(2) On the 2nd occasion	.. Six times the normal water cess.
(3) On the 3rd occasion	.. Twelve times the normal water cess.
(4) On the fourth or any subsequent occasion.	Twenty times the normal water cess.

(*b*) In all other areas :—

(1) On the 1st occasion:	.. Twice the normal water cess.
(2) On the 2nd occasion :	.. Five times the normal water cess.
(3) On the 3rd occasion :	.. Ten times the normal water cess.
(4) On the 4th or any subsequent occasion.	Twenty times the normal water cess.

10. *Wet Lands.*—For the irregular irrigation of any wet land, water cess will be levied at a rate exceeding the rate of water cess which would be levied on land, if the irrigation had not been irregular, by the amounts specified below :—

(*a*) In the areas commanded by the Godavari and Krishna irrigation systems :—

(1) On the 1st occasion	.. Twice the normal water cess.
(2) On 2nd occasion	.. Five times the normal water cess.
(3) On the 3rd occasion:	.. Eleven times the normal water cess.
(4) On the 4th or any subsequent occasion.	Nineteen times the normal water cess.

(*b*) In all other areas :—

(1) On the 1st occasion	.. The normal water cess.
(2) On the 2nd occasion	.. Four times the normal water cess.
(3) On the 3rd occasion:	.. Nine times the normal water cess.
(4) On the 4th occasion or any subsequent occasion.	Nineteen times the normal water-cess.

11. On account of the general rise in prices, the maintenance cost of the various irrigation projects has greatly increased. The working expenses and the interest charges have risen considerably, but the gross revenue from irrgation has remained the same. In order to meet the increasing cost on the maintenance and repairs of irrigation sources, the Government of Andhra levied an additional assessment at the rate of 18¾% of the amount of land revenue assessment payable on wet lands in the State of Andhra under the Andhra Land Revenue (Additional Wet Assessment) Act, 1956. This additional wet assessment has been increased to 37½% under the Andhra Land Revenue (Additional Wet Assessment) (Andhra Pradesh Amendment) Act, 1957. The additional wet assessment is intended to increase the water rate component of the wet assessment by 50%.

12. The Government have also passed orders in G.O. Ms.No. 982 Rev., dated 27-5-57 enhancing the water rates by 25% subject to the ceiling noted below; operative from 1-7-1956.

For all crops other than duffassal crops :

(1) For the 1st irrigated crop: Rs. 10 per acre.

(2) For the 2nd or 3rd irrigated crop: Rs. 5 per acre.

For duffasal crops.—Rs. 15 per acre.

The enhancement is not however applicable in cases of irrigation from wells, spring channels and tanks deriving supplies from a source other than a river. The Government have again enhanced the water rates to 50% in G.O.Ms. No. 1161 Rev., dated 23-6-1958 inclusive of the 25% already made, from 1-7-1957 subject however to the same ceilings fixed in the earlier G.O. The enhancement is not however applicable in cases of irrigation under wells and spring channels and lands served by rainfed tanks which ordinarily receive supply of water for a period of less than eight months a year.

CHAPTER VI

Methods of irrigation in Telangana region

The importance of conservation, control and utilization of water flowing down the many rivers and streams for irrigation has been realised many a century back with the result that the whole of Telangana area is studded with thousands of small tanks impounding surface drainage and artificial lakes, constructed by the ancient rulers for growing paddy, which is the staple food crop of the people. There are no less than about 33,000 surface tanks, big and small, besides a few big artificial lakes notable among which are Pakhal, Ramappa, Laknavaram, Shanigaram and Ghanpur lakes said to have been constructed by the Kakatiya rulers in the 13th century A.D.

2. These surface tanks along with a few anicuts, wells etc., constructed by the ancient rulers, formed the back-bone of irrigation in the Telangana area. But as time passed on, due to various reasons, majority of these works fell into a state of disrepair. Thus, not only extensive repairs were required, but in some cases, actual restoration also became necessary requiring skilled supervision. For this purpose , the Irrigation Department was formed in 1896, in the erstwhile Hyderabad State, with its headquarters at Hyderabad, under a Chief Engineer. Since then this department has engaged itself in improving and increasing irrigation by:—

(*a*) Repairing and restoring the old irrigation sources;

(*b*) Constructing new reservoirs across streams and

(*c*) Maintaining the old and newly constructed works.

3. The first step towards this end was to restore the ancient big lakes of Lakhnavaram, Pakhal, Ramappa etc., which were able to irrigate an area of 29,673 acres. Simultaneously, thousands of rainfed tanks were repaired and restored to requisite standards.

4. Of the 33,000 tanks, about 12,438 are having an ayacut of less than 10 acres each; 19,589 tanks between 10 and 200 acres each and the rest above 200 acres each. As a policy, the tanks having less than 10 acres under each are looked after by the cultivators themselves under the control of the Revenue Department. The Irrigation Department attends to repairs and restoration of all the tanks having ayacuts above 10 acres but regularly maintains only those tanks which have ayacuts of more than 50 acres. Breaches occur often in some of these tanks, as they are small and not strong enough to withstand the sudden and extraordinary floods during cyclones.

5. Apart from repairing and restoring the old irrigation sources, the Irrigation Department has been constructing new reservoirs across big streams. A number of such large and medium sized irrigation reservoirs were constructed: notable among which are Nizamsagar, Pocharam, Palair, Wyra, Pendlipakala, Chandersagar, Koilsagar, Dindee, Kaddam, Manair, Singabhupalayam and Baithapalli.

6. The soils, in Telangana, generally are suitablefor irrigation and people are generally eager to utilise irrigation facilities, if made available. The undulating character of the country, lends itself more favourably to the irrigation of isolated patches from tanks, wells and smaller streams. The Telangana country is traversed by innumerable streamlets and nalas which have been used for storing rain water by putting earthen bunds across them. Further the soils in Telangana being sandy loam, it is necessary to store water; and for that purpose advantage has been taken in the past of the undulating character of the ground constructing large tanks and kuntas. Besides the tanks and kuntas or ponds, irrigation is also carried on from wells, generally and by means of canals and anicuts.

7. The irrigation in Telangana can be divided into two categories namely, 'Flow and Lift'.

(*a*) *Sources of flow irrigation.*—The various sources of flow irrigation, in the Telangana region are large reservoirs, projects, tanks, kuntas, kalvas (including Parrekalvas), nalas (open mouth channels) and Uppal-wat-Bondas. The important irrigation systems under flow irrigation are the reservoirs.

(1) *Nizamsagar project.*—This project was constructed 27 years ago and water was first let out in the year 1932. This was the first Major Detention Reservoir undertaken by the erstwhile Hyderabad State, by harnessing the waters of Manjira river, at a cost of Rs. 394.33 lakhs. Originally, the Irrigation Department estimated the area, to be irrigated under the project, at 2,75,000 acres, but subsequently it was found that the aggregate area that could be irrigated, would be in the neighbourhood of 1,70,000 acres. If in a year, the reservoir is full, by the end of October, it would be possible to give water for the total area of 1,03,920 acres in Abi and 62,000 acres in Tabi. According to the latest decision, the project is to irrigate 11,04,360 acres, in Abi and 62,000 acres in Tabi, besides the old area of 21,055 acres, under old tanks. The area cultivated in the year 1956-57 is as follows :—

(1) Abi	..	..	93,023 acres.
(2) Tabi	..	..	57,701 ,,

The above areas are exclusive of the old wet area of 21,055 acres. The areas shown under Abi and Tabi include also 22,164 acres, under sugarcane. Hence an area of 13,600 acres remaining to be developed, has not yet been located by the P.W.D. The P.W.D. is making necessary investigation to localise the said area. The Special Chief Engineer of Irrigation, is of opinion that as a period of over 20 years has lapsed since the previous survey and as the previous settlement was not based on the contour maps, he has proposed to localise the ayacut under the project, afresh, as it has more reached the saturation point of irrigation.

(2) *Kaddam project.*–This is constructed at Peddur village, in Adilabad district, by harnessing the waters of Kaddam river which rises in Boath taluq of the same district and falls in the Godavari after a course of about 48 miles. The main canal under this project is 47 miles long and is designed to irrigate 65,000 acres in Abi and 2,000 acres in Tabi. Six villages have been affected by the water spread of the reservoir either wholly or partially. Necessary arrangements for the rehabilitation of these displaced persons have been made by the Government. Construction of the project was completed in June, 1955 and water was let out for irrigation in the the same month. In spite of short notice the ryots could irrigate 827 acres in Abi 1955-56. The year 1956-57 was the second year of irrigation. The P.W.D. has drawn up a programme for supplying water to 10,000 acres. But due to some reason or other, the P.W.D. could not complete the distribution system for the above area and only an extent of 8,524-38 acres was irrigated in Abi 1958-59.

The dam breached on 31-8-1958 due to unprecedented floods. In order to save the standing crops supplies have been arranged by diverting natural streams and nalas into the main canals by installing pumps wherever possible.

(3) Besides the above projects, there are 29 projects, the details of which are appended.

The extent of irrigated crops in the Telangana region at the end of the first half of the present century was only at 13.7% of the total cultivated area. Obviously there is plenty of scope for improving the position.

An effective way of achieving this object is to harness the waters of the big rivers flowing through the State. Hitherto, the development of irrigation was confined only to the small streams and rivulets and the waters of the major rivers, the Godavari and Krishna were left untapped. It was proposed to construct a series of multipurpose projects on these rivers and their tributaries to utilise to the maximum extent, the waters of these rivers. The Nagarjunasagar project is under construction on the river Krishna.

Canals from rivers are of two kinds *viz.*, inundation canals which flow only during floods and perennial canals from reservoirs and 'pucca' anicuts. Inundation canals are scattered here and there in Telangana area. Perennial canals flow from the Nizamsagar project.

(4) *Parrekalva.*—It is a kind of channel dug in the bed of small streams for conveying sub-soil water for irrigating fields. A big depression is made in a stream or river and the water is carried to the fields by digging a channel for a distance of about a mile or two and then diverting it to the lands for irrigation. This kind of irrigation requires a great deal of manual labour, as the bed of the river is sandy and the silt has to be removed constantly from the temporary channel. All this labour is contributed by the ryots.

(5) *Uppalwatbonda.*—It is a kind of spring well from which water is available for irrigation by everflow as from patasthal source. It is, therefore, treated as a patasthal or a source of irrigation, by flow.

(*b*) *Sources of lift irrigation.*—Wells and Bhurkis with mhotas, yatam guda etc., are treated as lift irrigation sources or 'motasthal'.

(1) *Wells.*—The system of irrigation under wells is in vogue in all the districts of Telangana. The area irrigated under wells which are mostly private wells is 2,86,755 acres.

Irrigation under wells is purely optional. It is not compulsory, as it is under tanks and other sources. In the case of all patasthal wet lands, whether classed by settlement as single crop Abi or double crop, the Abi crop shall be deemed to be 1st crop, and Tabi the 2nd crop. Cultivation of all such lands in Abi is compulsory, if water is available in the source in 'Ashleshakarthi', cultivation in Tabi also is compulsory if water is available. About 75% of wells are used for protective or light irrigation. Dry crops like maize, jowar and wheat are grown and watered to two or three times to get surer and better yields. In very few cases, commercial crops like chillies, sugarcane, plantains or turmeric are grown and these too are restricted to small areas. Much capital has to be invested in sinking wells. Running costs of lifting the water are also heavy. Ordinary cultivators cannot afford to keep a 'Mhota' and incur heavy expenditure on the cultivation of commercial crops. Moreover, irrigation under wells is shifting from year to year. The area of two or three acres that could be irrigated is changed, usually, in alternative years. Wells are mostly owned jointly by many hissadars (shareholders) and water taken by turns. Many of them use their share of water occasionally. A few of them even sell their right, of using the water, for a season or two. For land revenue assessments, the existence of wells is now altogether overlooked and no charge is levied for irrigation under wells, in tank ayacuts. The idea is to encourage the sinking of new wells, in patta lands, for which subsidy is being given by the Government.

(2) *Yatam or Guda.*—If water from the main source does not suffice as under small kuntas, the cultivator has to save his crop by lift irrigation by a yatam or guda. In such cases the water class is lowered.

(3) *Bhurkis.*—Bhurkis may be briefly defined as "wells" sunk on the banks of rivers, vagus and nalas for irrigating lands. They are similar to the "doruvu" wells of the Madras presidency and the "Dhekudies" of the Bombay presidency. Bhurkis are of two kinds, 'Pucca'. and 'Kacha'. According to the standing orders of Government, dry lands under Bhurkis constructed on the banks of natural rivers and nalas shall be charged 1 & 1/8 the maximum dry rate of the village, in the case of pucca Bhurkis and 1 & 1/4 the maximum dry rate in the case of kacha Bhurkis, until the next revision settlement.

8. '*Asmani Tari*' *and* '*Kariveda*'.—No additional assessment will be charged, if a second crop is raised or Asmani Tari (raising paddy crop with rain water) is cultivated on dry lands, but if paddy crop (Kariveda) is raised in the bed of a source of irrigation or with water which flows into such a source, the lowest wet rate of assessment fixed for the village will be charged. In many parts of Adilabad, Karimnagar and Warangal districts Kariveda (Paddy) crop is grown. In spite of all these schemes, there are, still many more possibilities of harnessing the waters of rivers and streams flowing across the Telangana region, and there is ample scope for further expansion of irrigation by means of major, medium and minor irrigation projects.

Para 2. Brief summary of the rules and orders relating to levy of wet rates and water charges in the districts of Telangana region.

Wet rates in Telangana are levied under sections 53 and 82 of the Land Revenue Act, and the Hyderabad Land Revenue Rules of 1951. The rates are consolidated with land revenue. Water rate, as such, is not levied or collected separately. Sources of irrigation are classified according to the commandable area and period for which water can be supplied.

2. Consolidated irrigation rates are fixed as maximum wet rates for a group of villages having identical conditions. They

are separately fixed for irrigation under flow and irrigation under lift. The range of maximum wet rates in the Telangana is :—

(*a*) For irrigation under flow: I.G. Rs. 6.85 to 18.85 per acre.

(*b*) For irrigation under lift: I.G. Rs. 4.28 to 10.28 per acre.

3. In cases of new irrigation works a concession of irrigation rates is given as an inducement to the cultivators for reclaiming the land and for bringing it under irrigation. At present the concession consists in granting complete exemption from payment of water rate in the 1st year, and in charging 1/4, 1/2, 3/4 and full revenue, respectively, in the 2nd, 3rd, 4th and 5th years. In light irrigation zones, where supply of water is not guaranteed, and where it depends upon the vicissitudes of the season, no irrigation rates are fixed. It is levied at a moderate flat rate (Rs. 4-2-0 per acre under Nizamsagar) in the years, when water is available and for lands which are actually irrigated.

4. Irrigation of lands in the commandable area is compulsory and wet assessment is charged on all lands localised as wet in this area, whether the land is cultivated or not, with wet crops. The methods of irrigation obtaining in Telangana have been described in detail in the foregoing paragraphs.

5. Under the present rules, any tank which irrigates more than 30 acres is classed as a 1st class source, while other sources which irrigate less than 30 acres, are placed in second class (water class—2 annas).

6. In the case of major irrigation projects, an average rate is shown in the forecast which is expected to yield a definite return on the capital outlay and then the settlement officers are asked to survey each field included in the ayacut and work out the maxima and minima rates for soils and crops of the same nature. These rates are usually higher than those levied under ordinary tanks where irrigation is not assured and the maintenance also is not done regularly and up to the standard. Under major irrigation sources, a carry-over policy is adopted in order to supply water at the proper time for Abi, if the monsoon, does not set in at the normal time. A statement of rates of assessment charged under different irrigation projects is given in Appendix 7.

7. The assessment levied on sugar-cane and betel-vines, differs from that on other garden and wet crops. The rates of assessment are higher and the rates vary, for the same crop, from district to district according to local conditions. This is based on the ground

that more water has to be supplied for a much longer period than one season.

8. The irrigation sources and their water class is given below:

(*a*) *Yatam or Guda.*—If water from the main source, does not suffice as under small kuntas and the cultivator has to save his crop by means of 'Yatam' or 'Guda' lifts, the water class is lowered for this manual labour and fixed as—

Yatam	2½ annas
Guda (Pikota)	2 annas.

If water is taken from a patasthal (flow) source by means of Yatham or Guda to irrigate lands situated on a higher level flow wet rate is charged after reducing the water class to 2½ to 2 annas, respectively, to allow for the labour involved in lifting water.

(*b*) *Uppal-wat-bonda.*—These are treated as patasthal sources and water class is fixed as one anna, and if the source is from *Jhara* which is not of the same capacity as a spring and is for a short period, at 2 annas.

(*c*) If irrigation is from a sluice at a lower level the classification is one anna, but if the sluice is at a higher level, the classification is fixed as two annas.

(*d*) Where the water is saltish and hence less useful for the growth of crops, the water class is reduced by one anna. When the water flows over karal (saline) land and brings in water mixed with limestone particles, the water value to be assigned to such land is reduced by another half anna.

9. Under the above principles, the following rates are charged for different categories of irrigation sources :

(*i*) For 2nd crop paddy	Half of the wet assessment for the 1st crop.
(*ii*) For single crop paddy grown in dofasal lands in Tabi.	Full wet assessment as for the 1st crop.
(*iii*) For perennial like sugarcane, pan-malla etc. (12) months crop.	2½ times the single wet crop.
(*iv*) For sugarcane (Adsali) 18 months crop.	3½ Abi.
(*v*) For Do-fasal crop of 8 months duration not falling under items (*iii*) and (*iv*).	1½ time the Abi rate.
(*vi*) For light irrigation crop	Rs. 4 to 6.

(*vii*) If due to non-availability of water in a source the wet cultivation is done—

(*a*) By well constructed by ryots	Ordinary dry rate.
(*b*) By Government well situated in the ayacut.	Highest dry rate of the village.
(*c*) By Government well situated in gairan or poramboke lands.	Half of the patasthal rate.

(*viii*) All lands under wells situated outside the ayacut are assessed dry rates.

(*ix*) Manawari lands situated outside the ayacut of the patasthal source are assessed at dry rates and inside the ayacut at wet assessment.

(*x*) When water is lifted from the channels of patashtal sources by means of mechanical pumps with the permission of the Collector ¼th of the wet assessment will be remitted as per rule 62 of the Land Revenue Rules of 1951.

(*xi*) As per rule 68 of the Land Revenue Rules, when water is taken from Government source to irrigate the dry lands the wet assessment after deducting the dry assessment will be levied. In case, by giving water like this, the fixed ayacut is affected the dry rate will not be deducted.

(*xii*) When a land is irrigated by percolation from a Government source, wet rate will be levied treating that the irrigation was done by the Government source.

(*xiii*) Under rule 73 of the Hyderabad Land Revenue Rules, 1951 lands irrigated under 'parrekalwa' will be charged dry assessment plus 1/3rd of the difference between the maximum wet and dry rate of assessment of the village subject to maximum of Rs. 5 per acre.

(*xiv*) In case of single crop wet land cultivated in both the seasons, an additional charge equal to half of the Abi assessment will be charged as per rule 43.

(*xv*) If a third paddy crop known as Edigar paddy is raised in a Do-fasal patasthal wet land no additional assessment will be levied.

(*xvi*) Lands irrigated from jungle streams which receive a casual supply may be utilised without charge provided it does not affect any Government source (Revenue Department Circular No. 16 of 1325 fasli).

(*xvii*) In case a dry crop is raised on wet land with the aid of Government water double dry assessment will be levied (Rule 60 of Land Revenue Rules).

(*xviii*) Wet lands situated under tanks receiving no water for continuously 4 years will be classified as dry land.

(*xix*) In case of Tabi cultivation, Tahbandi has to be done fixing every year the irrigable area under each source.

(*xx*) If a cultivator exploits the sub-soil water or the water flowing to waste, for irrigation purposes at his own cost and with the permission of the Revenue Officers, only the ordinary dry rate is levied.

(*xxi*) *Green manure crops.*

(1) If water for green manure crops and Abi is taken for not more than six months, which is the longest duration of Abi, from the date of opening of the canals, no extra assessment should be levied.

(2) Similarly, if water is taken for green manure crops and Tabi for not more than four months from the date of letting out water, no extra assessment should be charged, and

(3) If water is taken for any extra period over and above the periods mentioned above, extra assessment equal to half of the Abi rate or half of the Tabi rate as the case may be should be levied.

10. The calculation of wet assessment is made as per the "Sharenavisi" showing the area under irrigation.

11. Allowance is made for any manual labour or other labour needed for lifting water. This water class (value assigned to each irrigation work) is consolidated with the soil value for the fixation of a consolidated assessment. Generally speaking, the consolidated irrigation rate is more than the actual charge for water supply, as it also contains an element of additional levy on the increased yield from the land because of irrigation. Remissions are granted under the Land Revenue Rules, for wet lands not irrigated, owing to reasonable grounds, or for lands where crops are destroyed on account of scarcity of water, or for other reasons, beyond the control of the cultivators.

[*Statement.*

Sl. No.	Name of the project	District in which it is situated	Cost of the project in Lakhs.	Ayacut envisaged (in acres)	AYACUT DEVELOPMENT Abi (in acres)	AYACUT DEVELOPMENT Tabi (in acres)	Total area irrigated in 1956-57 (in acres)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Rs.				
1.	Nizamsagar project	Nizamabad	394.33	1,70,000	95,023	57,701	1,52,724
2.	Pocharam „	do	..	13,069	14,718	..	14,718
3.	Kaddam „	Adilabad	..	67,000	2,414	..	2,414
4.	Arjunpatla „	Warangal	6.31	1,227	260	152	412
5.	Pakhal „	do	4.50	10,500	5,925	5,110	11,035
6.	Ramappa „	do	2.93	5,197	4,459	1,052	5,511
7.	Lakhnawaram „	do	3.06	3,716	2,937	1,017	3,954
8.	Gagilapur „	do	7.21	680	214	105	319
9.	Bheemghanpur „	do	0.50	1,783	1,065	718	1,783
10.	Ghanpur „	do	..	2,955	1,532	1,644	3,176
11.	Palair „	Khammam	2.45	16,084	14,286	..	14,286
12.	Singabhupalam „	do	2.97	1,800	1,753	..	1,753
13.	Wyra „	do	35.09	14,557	11,626	..	11,626
14.	Baithapalli „	do	2.27	4,800	2,500	..	2,500
15.	Koilsagar „	Mahabubnagar	..	Abi 12,000 Tabi 2,500	7,154	..	7,154
16.	Chandrasagar „	do		Abi 2,700 Tabi 300	1,213	..	1,213
17.	Manair „	Karimnagar	..	14,000	10,401	..	10,401
18.	Yakinpur „	do	..	1,474	876	..	876
19.	Chegaon „	do	..	1,102	658	..	658

STATEMENT.—(*Contd.*)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
20.	Bandalvagu Project	Karimnagar	..	1,040	234	..	234
21.	Shanigaram ,,	do	(450 seers of Gold)	4,856	1,942	2,770	4,712
22.	Dindi ,,	Nalgonda	..	15,000	17,049	..	17,049
23.	Pendilipakala ,,	do	..	5,000	4,388	..	4,388
24.	Bheemanpalli ,,	do	..	1,860	1,214	..	1,214
25.	Asifnahar ,,	do	..	4,539	5,547	..	5,547
26.	Ootukurmarpalli	do	..	850	850	..	850
27.	Shaligowararam	do	..	1,622	1,973	..	1,973
28.	Fateh Nahar ,,	Medak	..	4,377	5,478	..	5,478
29.	Mahboobnahar ,,	do	..	6,345	4,988 2,656	21 double crop.	7,665
30.	Rayanpalli ,,	do	..	800	168	526 double crop	694
31.	Old Godavari canal	Adilabad	..	..	..	,,	7,000

CHAPTER VII

Taxes now levied on land and agricultural produce in addition to the rates fixed in settlement and resettlement including land cess and other cesses levied under :

(*i*) The Madras District Boards Act, 1920.

(*ii*) The Madras Elementary Education Act, 1920.

(*iii*) The Madras Village Panchayats Act, 1950.

(*iv*) The Madras District Municipalities Act, 1928.

(*v*) The Andhra Pradesh Commercial Crops (Assessment) Act, 1957.

(*vi*) The Andhra Pradesh Land Revenue (Surcharge) Act, 1957.

(*vii*) The Andhra Land Revenue (Additional wet Assessment) (Andhra Pradesh Amendment) Act, 1957 and

(*viii*) The Andhra Land Revenue Assessment (Standardisation) Act, 1956; and other acts now in force in Andhra Pradesh.

1. Land Cess.

(The Madras District Boards Act, 1920)

The importance of Local Self Government has been recognised even from the time of British Rule and the British have embarked on the introduction of Local Self Governing institutions in the country, like the District Boards, the Municipal Corporations, the Municipalities and the Village Panchayats. These institutions have gradually developed and they have now become an integral part of the National Administrative Machinery, playing the same vital role that is assigned to similar institutions in other democratic countries. The importance of these institutions is increasing day by day and they are eventually to take charge of the social services of the State.

2. The local bodies have restricted powers of taxation, though these powers are comprehensive as they cover persons, property and business. One of the most important source of revenue is the land cess. The income from land cess in Andhra is over 60% of the aggregate revenue derived by the Local Boards. Land Cess, however important a soure of revenue it may be, has proved to be an inelastic source of income for local boards as it is based on land revenue which itself usually remains static during a period of 30, 20 or 15 years for which the rates are unalterable. Under Section 78 of the Madras District Boards Act, 1920, land cess is levied at the rate of two annas in the rupee, on the land revenue payable by every landholder. Under section 135 of the Hyderabad District Boards Act, 1956 local cess is leviable at the rate of

two annas on every rupee of land revenue payable to the Government. Thus every landholder in a ryotwari area is liable to pay land cess on the land revenue payable by him and also on the water cess and miscellaneous revenue payable by him. In zamindari areas, the cess is based on the rents payable to the zamindars but, however, in view of the abolition of the zamindaris, the cess is now collected on the reduced rents and on the settlement rates if introduced as in the case of the ryotwari areas. In the case of inam lands, land cess is not levied on the quit-rent or jodi but only on the equivalent ryotwari assessment of that land. The charging of ryotwari assessment on inam land has not therefore resulted in any increase in the cess payable in respect of these lands. Enhancement of the ryotwari assessment or water-rate will alone bring about an increase in land cess to the local bodies. In Andhra region land cess is usually collcted by the State Government along with the land revenue and credited to the local bodies. In Telangana, the collection charges are, however deducted before making over receipts to the local boards.

2. Education Cess.

(The Madras Elementary Education Act, 1920)

3. Education cess is another important source of revenue to the local bodies. This also, like land cess, is in the nature of a surcharge on land revenue and is collected by the State Government along with the land revenue and credited to the local boards. Under Section 35 of the Madras Elementary Education Act every landholder is liable to pay education cess on the land revenue payable by him. The cess is levied on the land revenue assessment, and on the water-cess and miscellaneous revenue payable by the landholders in ryotwari areas. In zamindari areas, the cess is based on the rents payable by the zamindars but however in view of the abolition of zamindaris, the cess is now collected on the reduced rents or on the settlement rates if introduced as in the case of ryotwari areas. The rate of education cess in various districts of the Andhra region is at three annas in a rupee of land revenue paid. In Telangana, there is no education cess as in the case of Andhra region.

3. Tax on Agricultural Land.

[(*i*) The Madras Village Panchayats Act, 1950.
(*ii*) The Madras District Municipalities Act, 1928.]

4. Among other taxes, the Village Panchayats and the Municipalities can also levy the following taxes:—

(*a*) *By Village Panchayats.*—Under Section 63 (3) (*b*) of the Madras Village Panchayats Act, 1959, a village panchayat may levy in the village, a tax on agricultural land for a specific purpose, subject to such rules as may be prescribed and with the sanction of the Inspector-General of Local Administration and also subject to such restrictions and conditions imposed by him. A statement showing the names of the Panchayats for which sanction was accorded by the Inspector-General of Local Administration to levy agricultural tax is appended below :

NAMES OF PANCHAYATS FOR WHICH SANCTION WAS ACCORDED FOR LEVY OF AGRICULTURAL TAX.

1. East Godavari.

Atreyapuram Panchayat, Kothapeta Taluk at the rate of Rs. 3-2-0 per acre per half-year, with effect from 1-4-1958 for two half-years.

2. West Godavari.

1. Vandram Panchayat; Bhimavaram taluk at the rate of Rs. 8 per acre per one half-year for a period of one half-year or Rs. 4 per acre per half-year for a period of one year (L.Dis. No. 61691/57, dated 17-10-57).

2. Kalavapudi Panchayat, Bhimavaram taluk, rate at Rs. 10 per acre per half-year, for a period of six months. (L.Dis. No. 83906/58, dated 5-10-1958).

3. Siddapuram Panchayat, Bhimavaram taluk, at the rate of Rs. 5 per acre per half-year for a period of one year. (L.Dis. No. 18061/58, dated 10-6-58).

4. Velagapalli Panchayat, Tadepalligudem taluq, at the rate of Rs. 5 per acre per half-year for a period of two years. (L.Dis. No. 40997/58, dated 29-5-1958).

3. Krishna District.

Motur Panchayat, at Rs. 5 per acre per half-year for two half-years of 1958-59 (L.Dis. No. 56766/57, dated 6-11-1958).

4. Guntur District.

1. Tadikonda Panchayat, Guntur taluq, at the rate of Rs. 2-8-0 per acre per half-year for a period of two years. (L.Dis. No. 7054/57, dated 2-5-1958).

2. Chiluvur Panchayat, Tenali taluq at the rate of Rs. 2-8-0 per acre per half-year for a period of one year (L. Dis. No. 14423/54, dated 7-9-1954).

3. Chinalingayapalem Panchayat, Bapatla taluq, at the rate of Rs. 5 per acre per half-year for a period of two years. (D. Dis. No. 82726/58, dated 28-10-1958).

4. Narsaraopet Taluq, Pasumarru, Anantavaram, Enamadala, Eddanapudi, Gannavaram and Punoor Panchayats.

Rate:—

1.	Pasumarru ..	Naya-paise eighty seven only per acre per half-year for a period of six half-years.
2.	Anantavaram	Rs. 3 per acre per half-year for a period of six half-years.
3.	Enamadala ..	Rs. 3 per acre per half-year for a period of six half-years.
4.	Eddanapudi .	Rs. 3 per acre per half-year for a period of six half-years.
5.	Gannavaram	Rs. 3 per acre per half-year for a period of six half-years.
6.	Punoor ..	Rs. 3 per acre per half-year for a period of six half-years.

(D. Dis. No. 56232/58, dated 25-9-58).

(*b*) *By Municipalities.*—Under Section 81 (4) (*a*) of the Madras District Municipalities Act, 1928, a municipal council may in the case of lands used exclusively for agricultural purposes levy property tax (which includes a tax for general purpose, a water and drainage tax, a lighting tax, a scavenging tax, a railway tax) at such proportions, as it may fix, on the annual value of such lands, as calculated in accordance with the provisions of Section 79 of the Madras District Boards Act, 1920. If such lands be occupied by tenants, the Municipal Council shall levy the taxes in equal shares, from the landholder and tenant respectively.

4. Special charge on commercial crops.—

[The Andhra Pradesh Commercial Crops (Assessment) Act, 1957].

(5) In the general scheme of land revenue settlement, the crops taken into account in fixing the assessment are the staple food crops (*i.e.*) paddy in wet area and cholam, ragi, cumbu and korra in dry areas. No notice was taken of commercial crops or other cash yielding crops grown on lands at the time of settlement or resettlement. It is generally more profitable to cultivate commercial crops, than to cultivate food crops. There was therefore a need to impose tax on commercial crops, in order to collect a larger contribution from the better placed agriculturist. With this object in view special assessment on the commercial crops as noted below

has been levied from F. 1367 under the Andhra Pradesh Commercial Crops (Assessment) Act 1957.

		Per acre Rs.
1.	Casuarina	1 0 0
2.	Cotton	1 0 0
3.	Coconut	2 0 0
4.	Tobacco :	
	(*a*) Virginia	3 0 0
	(*b*) Other varieties	1 0 0
5.	Turmeric	5 0 0
6.	Sugarcane	5 0 0
7.	Plantains	5 0 0
8.	Chillies	2 0 0
9.	Citrus fruit	2 0 0
10.	Groundnut	1 0 0
11.	Betel Vine	5 0 0
12.	Onions	5 0 0

6. The collection of special assessments on groundnut and turmeric has been suspended, at present, due to the sudden fall in the price of turmeric and due to a heavy incidence of pests and inadequate and untimely rainfall for groundnut. The income under this head in F. 1367 is estimated at Rs. 58 lakhs.

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5. Surcharge on Land Revenue.

The Andhra Pradesh Land Revenue (Surcharge) Act, 1957.

7. The system of assessment on land lacks an element of progression in that a person who owns a large extent of land and enjoys a considerable net surplus from the produce pays assessment only at the same rate as another who has only a small holding which leaves no or only a small surplus to him. It has, therefore, become necessary to consider the question of levying a tax on agricultural income in order to introduce an element of progression in the system of land revenue assessment. One proposal is to levy agricultural income tax and the other is to levy surcharge on the larger holdings. The employment of some additional staff is necessary for the administration of Agricultural Income-Tax Act. In this connection the following observation of the Land Revenue Reforms Committee, Madras is relevant. "When the tax is being levied primarily with a view to secure an element of progression, the actual yield itself is not particularly relevant, provided that the expenses of collection do not absorb the bulk of the yield from the tax, for whatever net

income is derived by the tax would be in addition to the assessment levied on land as such". As the expenditure on the employment of additional staff could not be estimated accurately and as the alternate proposal of levying surcharge is much more beneficial than levying agricultural income-tax in that it can be collected with the available staff, the Government have decided to levy surcharge on the larger holdings. As a result, the Andhra Pradesh Land Revenue (Surcharge) Act, 1957 has been enacted. The surcharge is levied on the land revenue assessment and is based on slab system at the following rates :—

Amount of Land Revenue		Rate of Surcharge per Rupee
Rs. 10 per less	.. .. ..	nil
Exceeding Rs. 10 but not exceeding Rs. 100	..	13 nP.
Exceeding Rs. 100 but not exceeding Rs. 500	..	25 „
Exceeding Rs. 500	.. .. ..	50 „

8. The revenue demand under this head for the Fasli year 1366 (1956-1957) is Rs. 61,57,179 and the revenue expected in Fasli year 1367 (1957-1958) is Rs. 50,33,667.

6. Additional Wet Assessment on Wet Lands.—

The Andhra Land Revenue (Additional Wet Assessment) Act, 1956.

The Andhra Land Revenue (Additional Wet Assessment) (Andhra Pradesh Amendment) Act, 1957.]

9. Different districts and tracts were settled and resettled at different times. Broadly speaking, the continuous rise in prices during the periods of resettlement resulted in higher commutation rates being adopted in the case of the districts resettled at a later date than in the case of those which were resettled earlier. As a result, there is wide variation in the pitch of assessment in the different districts. Further, on account of the abandonment of the resettlement operations, the assessments in the several districts have remained unchanged, since the time of the last resettlement. There is therefore variation from district to district, in the incidence of assessment, in respect of lands, which have been estimated to yield an identical grain outturn.

10. In the case of dry land, the assessment represents the land revenue payable thereon and in the case of wet land the assessment includes a charge for water besides land revenue proper. The proportion of assessment due to water is estimated on the average, at 70% of the consolidated wet assessment and the balance of 30% represents on the average the land revenue element thereof.

If a resettlement of all the districts were to be undertaken at the present date, the assessment in all the districts is liable to be enhanced, since the present commutation rates based on the average of the prices of the last 20 years are much higher than the commutation rates at the last resettlements in the various districts. On account of the heavy rise that has taken place in the prices of materials and in wages and salaries, the cost of construction of new irrigation works and maintenance of old and new works has increased considerably. The accumulation of interest charges, the large scale extension and renovation of small schemes to increase food production have further contributed to an increase in the expenditure on irrigation. The significance of irrigation as an item of revenue has therefore dwindled relatively to the growth of other resources. Considerable scope for revision of rates has been provided by the improvement in the prices of agricultural produce during the war and in the postwar years. The incidence of water rates which were fixed during the latter period has thus gone down considerably in recent years emphasising the need for a revision of rates. Though the revision of rates itself would not enable the Government to reduce their current costs on irrigation works, it can safely be said that the increase in rates would certainly go a long way to cover the increased working expenses on projects.

11. The scope and justification for the inclusion of a tax on profit element in the water rate arises in areas (1) where the alternative cost of supply is higher than the rate fixed by Government or (2) where the area covered by the project is fairly developed and the irrigation facilities add further to this development. Moreover, where because of the low cost of construction and maintenance of old irrigation works, water rates are much lower than in other areas and advantage from these low rates is derived by individual cultivators, the State Government would be justified in increasing the water rates by adding an element of tax with a view to appropriate to the general revenues of the Government, some part of these large benefits that have accrued. As a result of it, the Government have enacted the Andhra Land Revenue (Additional Wet Assessment) Act 1956. Under section 3 of this Act, an additional assessment at the rate of 18¾% of land revenue assessment payable for the year has been imposed from 1-7-56 in respect of all wet lands in the state served by any Government source of irrigation, the exceptions being wells, spring channels and tanks deriving supply from a source other than a river. This Act has been amended by another act called the Andhra Land Revenue (Additional Wet Assessment) (Andhra Pradesh Amendment) Act, 1957. Under section 3 of this Act, the additional wet assessment of 18¾% on wet lands has been raised to 37½% with effect from 1-7-57 the exceptions being wells, spring channels and rainfed tanks which derive supply of water for a period of less than 8 months in a year.

12. The collection of additional wet assessment is however subject to the conditions, that the additional assessment together with the land revenue assessment payable in respect of the land shall not exceed rupees thirteen and naye paise fifty *per acre* in the case of *single crop* wet land and rupees twenty and naye paise twenty five per acre in the case of *double crop* wet land and that if the land revenue assessment payable in respect of any land is higher than the maximum specified above, such land revenue assessment alone shall be collected.

7· Land Revenue--Standardisation of Assessment.—

The Andhra Land Revenue Assessment (Standardisation) Act, 1957.

13. The land revenue settlements introduced by the British and as developed in a ryotwari state like Andhra is one of the achievements of the British rule. But this system has been on trial ever since the depression in the thirties. The pattern of the country's agricultural economy has considerably changed from the time of the initial settlement owing to the violent fluctuations in the prices of agricultural produce. Thus the place of land revenue has also changed with the changing character of the economy. Progressive monetisation, the development of internal transport, the growing commercialisation of agriculture and the general evolution of an all India market with the steady support provided to local prices have served to lighten the burden of land revenue. Since the beginning of the 20th century, the monetisation of economy has been carried farther by the process of commercialisation of agriculture. There has been considerable increase in the area under commercial crops, oil seeds, sugarcane, cotton, etc. Though the total area under the commercial crops appear to be relatively small, when compared to the area under food crops, the commercial crops are of great significance as they have been leading to the monetisation of the rural economy to a much greater extent than the food crops. These changes in the pattern of agriculture have led to the rise in prices. Consequently there has been steady increase in the prices of foodgrains. Foodgrains prices in 1891 have risen about a third higher than in 1872, and in 1912 the prices have risen again a third higher than in 1891. The first world war has again led to a sharp rise in prices and the level of foodgrains prices has almost doubled. In 1929 however foodgrains prices have started to decline as a result of the depression. But the second world war has caused an increase in foodgrains prices to more than 4 times, the pre-war level. Those whose lands had been settled or resettled in one of the earlier periods have to bear a lighter burden of assessment than those whose lands have been settled or re-settled later. Disparities of this type have occurred due to

the postponement of resettlements as a result of the depression and the war. They can only be minimised by a readjustment of assessments in relation to the dates of resettlement or more accurately to the period taken into account at resettlement for fixing the price levels, on which among other things the revision is based. The movements in prices have been such that a certain degree of readjustment of this kind has become necessary on grounds of equity. In order to correct the existing disparities of assessment within the said limit and to the extent practicable, the rates of assessments have been standardised with the enactment of the Andhra Land Revenue Assessment (Standardisation) Act, 1956.

14. According to this Act the standard rates of assessment are fixed as follows : (*a*) in respect of (1) the Kadiri taluq of Anantapur district, (2) the Madanapalli and Voyalpad taluqs of Chittoor district (3) the Cuddapah district (4) the Guntur district (5) the Kurnool district excluding the Adoni and Aloor taluqs (6) the Nellore district and (7) the Srikakulam district excluding the Bobbilli, Cheepurupalli, Palakonda, Parvatipuram, Pathapatnam and Salur taluqs, the current rates of assessment together with an addition of two annas in the rupee of such assessment in the case of dry lands and half anna in the rupee of such assessment in the case of wet lands.

(*b*) In respect of (1) the Chittoor district excluding the Madanapalli and Voyalpad taluqs (2) the Bobbili, Cheepurupalli, Palakonda, Parvatipuram, Pathapatnam and Salur taluqs of Srikakulam district and (3) the Visakhapatnam district, the current rates of assessment together with an addition of one anna in the rupee of such assessment in the case of dry lands and three pies in the rupee of such assessment in the case of wet lands and

(*c*) In respect of (1) the Anantapur district excluding the Kadiri taluq, (2) the East Godavari district, (3) the Krishna district (4) the Adoni and Aloor taluqs of Kurnool district and (5) the West Godavari district, the current rates of assessment without any addition.

15. The standardisation effected in the Andhra region was based on the recommendations of the Taxation Enquiry Commission, 1954.

CHAPTER VIII

Para 1.—*Market Values of different types of agricultural lands'*

1. The land value depends on the demand, which varies from district to district and on the conditions of the money market. The

value of the land also depends on the following factors :

(*a*) the existence of wells, water courses, facilities for storage or distribution of water for irrigation,

(*b*) the existence of works for the drainage of the land or for protection of land from floods or from erosion or other damage by water, and

(*c*) any reclamation work, levelling or bunding required.

2. The population has increased faster, than the expansion of cultivation. The increasing pressure of population on land, necessarily increases the competition for lands available for sale, with the result that prices shoot up.

3. Lands having special facilities for irrigation for first and second crops naturally fetch special prices. Many ryots do not possess plots, suitable for raising early seed-beds. Such lands should have special facilities for getting water in summer, either from a well, a tank or a spring. It very often happens, that lands adjoining a ryot's holding become available for sale. There are numerous cases where the purchase of such bits of land would enable the ryot to make a compact block of his field. In districts, where fragmentation of holding is so general, the ryots are naturally anxious to purchase such lands belonging to other ryots, as would enable them to save cultivation expenses and to consolidate their holdings. The sale might include land which contains a house or a cattle-shed or a well or fruit trees.

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In such cases, naturally, the values are higher than other lands, on which, the ryot has not spent much for rendering it more fertile or for improving irrigational facilities. In many cases, very good lands are often sold either by small ryots, who are heavily involved in debts, or by those who wish to migrate from the village to some new area.

4. In the beginning of the last century, land values were low and the ryots wanted special privileges of relinquishing lands. Now, land values have increased appreciably and there are practically no cases of relinquishments of lands by the ryots, as the cultivation is generally remunarative. However, we do not have reliable and adequate data for arriving at the current market rates. A close examination reveals that the values of the lands, noted in the sale deeds, at the time of registration, are also not reliable and that there are many factors which induce a ryot to under-value the lands noted in the sale deeds, produced for registration. The Committee elicited information on the market values of lands in all the places visited.

5. The Committee is able to gather through their questionnaire, information about the market value of the lands of all varieties now prevailing in the several villages, of both the Andhra and the Telangana regions. The Special Collector for Nagarjunasagar Project has also furnished the Committee, the particulars of prices of lands in both the Telangana and the Andhra regions at which the land is acquired for project purposes.

6. One of the chief reasons for the increase in the land values is, no doubt, the rising prices, in the recent years, besides, the increased population and the increased cultivation, in these areas. The past history of the prices and the consequent trend of increased land values support the aforesaid view. Three long price cycles have occurred during the last 160 years, each covering about 50 years. Each can be divided into two parts : first, a period of rising prices, culminating in a peak during a war, and second, a period of decline following the peak.

7. Beginning in 1933 we apparently began a fourth cycle with prices rising to a peak after World War I.

The approximate durations of the periods are :—

(*a*) Rising prices	1790 to 1816.
(*b*) Falling prices	1816 to about 1845.
(*c*) Rising prices	1845 to 1864.
(*d*) Falling prices	1864 to 1896.
(*e*) Rising prices	1896 to 1920.
(*f*) Falling prices	1920 to 1932.
(*g*) Rising prices	1932 onwards.

8. In each of the four periods of rising prices, the price of land tended to rise and debts were easier to pay either out of income or by sale of the property. Conversely, in periods of price-declines, farm-incomes and land values fell and debts, were more difficult to pay.

9. The details of land values in different districts as gathered from answers to quentionnaire are enumerated below in a tabular form :

[*Statement.*

Name of the district	Classification of land	Official or non-official		Range of market value per acre
(1)	(2)	(3)		(4)
				Rs.
1. Anantapur ..	.. Wet land	Officials	7	1,000 to 3,000
			2	2,000 to 5,000
			4	500 to 1,000
		Non-officials	11	500 to 2,000
			1	3,000
			1	4,000
	Dry land	.. Officials	10	50 to 500
			3	501 to 1,500
		Non-officials	4	20 to 100
			12	101 to 1,000
	Garden land	Officials	2	500 to 1,000
			2	1,500 to 3,000
2. Chittoor	.. Wet land	.. Officials	1	500 to 1,000
			14	1,000 to 3,000
			1	4,500 to 7,000
		Non-officials	36	500 to 3,000
			6	2,000 to 4,000
			1	3,500 to 6,000
			4	200 to 1,000
	Dry land	.. Officials	11	100 to 500
			6	500 to 1,500
		Non-officials	28	100 to 500
			7	500 to 1,500
			1	1,500 to 2,000
			2	50 to 500
	Garden land	.. Officials	4	100 to 1,000
			1	1,000 to 3,000
		Non-officials	1	750
3. Cuddapah	.. Wet land	.. Officials	12	1,000 to 3,000
			1	6,000 to 8,000 (in a few villages)
		Non-officials	8	400 to 1,000
			16	1,000 to 3,000
	Dry land	Officials	6	100 to 500
			3	500 to 1,500
		Non-officials	12	25 to 500
			4	500 to 1,000

Name of the district (1)	Classification of land (2)	Official or non-official (3)		Range of market value per acre (4)
				Rs.
	Garden land	Officials	1	600 to 1,000
			1	1,000 to 2,000
			1	1,500 to 5,000
		Non-officials	3	500 to 600
			1	1,000 to 2,000
			1	6,000 Betel vines.
			1	50 to 100
			1	800 to 1,600
4. East Godavari	Wet land	Officials	4	1,500 to 3,000
			3	500 to 1,000
			9	3,000 to 5.000
		Non-officials	16	2,500 to 3,000
			3	100 to 1,000
			5	3,000 to 4,500
	Dry land	Officials	4	150 to 500
			2	500 to 800
			1	800 to 1,500
			1	2,500
		Non-officials	5	50 to 500
			3	500 to 1,000
			3	1,000 to 2,000
	Garden land	Non-officials	1	1,250 to 2,500
			1	500 (Plantain)
				1,500 (Coconut)
5. Guntur	Wet land	Officials	5	1,500 to 3,500
			4	3,000 to 4,000
			2	4,000 to 5,000
			1	7,000
		Non-officials	17	1,000 to 2,500
			15	3,000 to 5,000
			7	200 to 1,000
	Dry land	Officials	1	100 to 500
			4	500 to 1,500
			2	2,500 to 5,000 (Black cotton soil)
			1	1,500 to 2,000
		Non-officials	13	500 to 2,000
			6	2,000 to 4,000
			6	100 to 500
			2	50 to 200

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Name of the district (1)	Classification of land. (2)	Official or non-official (3)		Range of market value per acre (4)
				Rs.
	Garden land	Officials-	1	5,000 to 6,000
		Non-officials	1	100 to 500
			2	800 to 1,200
			4	3,000 to 5,000
6. Krishna ..	.. Wet land	.. Officials	8	2,000 to 3,000
			4	1,000 to 1,500
			4	2,000 to 5,000
		Non-officials	6	1,200 to 2,500
			2	3,000 to 4,000
			3	4,000 to 5,000
	Dry land	.. Officials	4	500 to 1,500
			2	2,000 to 3,000
			2	300 to 1,000
			1	1,500 to 4,000
		Non-officials	3	500 to 1,000
			1	100 to 600
	Garden land	Officials	1	4,000 to 7,000
			2	3,000 to 6,000
7. Kurnool ..	.. Wet land	.. Officials	2	500 to 1,000
			9	1,000 to 3,000
			5	3,000 to 5,000
			1	3,000 to 6,000
		Non-officials	5	300 to 1,000
			3	500 to 1,500
			1	2,000
	Dry land	Officials	5	500 to 1,000
			10	100 to 500
			1	200 to 800
			4	150 to 1,500
		Non-officials	12	50 to 1,000
	Garden land	Officials	3	1,000 to 2,000
8. Nellore	.. Wet land	.. Officials	2	300 to 1,500
			3	500 to 3,000
			1	1,000 to 4,500
			9	2,000 to 3,500
			1	3,000 to 4,000

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Name of the district	Classification of land	Official or non-official	Range of market value per acre
(1)	(2)	(3)	(4)
			Rs.
		Non-officials 14	1,000 to 2,500
		2	300 to 1,500
		10	3,000 to 5,000
		2	2,000 to 4,000
	Dry land ..	Officials 12	50 to 500
		1	3,000 to 4,000
		Non-officials 17	50 to 500
		2	500 to 1,000
		2	20 to 25
	Garden land ..	Officials 5	250 to 1,000
		1	3,000 to 4,000
		4	1,500 to 3,000
		Non-officials 4	500 to 1;000
		1	200 to 500
		3	1,500 to 2,000
9. Srikakulam ..	.. Wet land ..	Officials 12	1,000 to 2,000
		2	500 to 1,000
		4	2,000 to 3,000
		1	5,000
		1	500 to 3,000
		Non-officials 8	500 to 1,000
		16	1,000 to 2,000
		4	1,500 to 3,000
		1	200 to 500
	Dry land	Officials 14	500 to 1.500
		5	200 to 500
		Non-officials 13	500 to 1,000
		11	100 to 500
	Garden land	Officials 3	1,000 to 2,000
		4	2,500 to 5,000
		Non-officials 1	1,000
10. Visakhapatnam	.. Wet land	.. Officials 2	3,000 to 4,000
		3	1,000 to 2,000
		2	500 to 1,000
		Non-officials 8	500 to 2,000
		4	2,000 to 4,000
	Dry land	.. Officials 5	500 to 1,000
		2	100 to 500
		1	1,000 to 1,500

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Name of the district	Classification of land	Official or non-official		Range of market value per acre
(1)	(2)	(3)		(4)
				Rs.
		Non-officials	10	100 to 1,000
			1	800 to 1,600
			1	300 to 1,500
	Garden land	Officials	1	1,500 to 2,000
		Non-officials	1	200
11. West Godavari	.. Wet land	.. Officials	2	1,500 to 2,000
			2	2,000 to 4,000
			1	1,000 to 3,000
		Non-officials	1	400 to 1,000
			1	1,000 to 1,500
			7	1,500 to 3,000
			1	1,000 to 4,000
			5	2,000 to 4,000
			1	5,000
			1	3,000 to 6,000
	Dry land	.. Officials	2	150 to 300
			1	800
			1	2,000
		Non-officials	4	50 to 500
			3	500 to 1,500
	Garden land	.. Officials	1	4,000 to 6,000
		Non-officials	1	500 to 1,000
12. Adilabad	.. Wet land	.. Officials	6	200 to 1,000
		Non-officials	11	300 to 1,000
			1	100 to 300
	Dry land	.. Officials	6	50 to 300
		Non-officials	8	125 to 300
			2	50 to 100
			1	1,000 (Black cotton soil)
	Garden land	..Officials	1	500 to 1,500
		Non-officials	1	500
13. Hyderabad ..	.. Wet land (single crop)	.. Officials	2	300 to 500
			2	100 to 300
			1	500 to 1,000
	(double crop)	,,	2	1,000
			3	300 to 500
			1	1,000 to 2,000

Name of the district	Classification of land	Official or non-official		Range of market value per acre
(1)	(2)	(3)		(4)
				Rs.
	(Single crop)	Non-officials	8	200 to 500
			3	500 to 1,000
			1	200 to 800
			1	2,000
	(Double crop)	Non-Officials	2	1,500 to 2,500
	Dry land ..	Officials	3	100 to 500
			3	50 to 100
		Non-officials	8	50 to 300
			3	30 to 60
			1	200 to 600
	Garden land	Officials	2	200 to 300
			2	300 to 400
14. Karimnagar ..	.. Wet land ..	Officials	2	400 to 1,000
	(Single crop)	Non-officials	11	200 to 1,000
			2	1,000 to 3,000
			2	500 to 2,000
	(Double crop)	Non-officials	3	2,000 to 3,000
	Dry land ..	Officials	2	50 to 100
		Non-officials	13	50 to 300
			3	300 to 500
			1	100 to 800
	Garden land	Non-officials	10	500 to 2,000
			1	1,000 to 3,000
15. Khammam ..	.. Wet land ..	Officials	2	300 to 1,500
			2	1,000 to 3,000
			1	800 to 2,000
			2	300 to 500
		Non-officials	7	500 to 1,500
			1	300 to 500
			1	1,000 to 2,000
	Dry land ..	Officials	3	300 to 800
			4	100 to 300
		Non-officials	10	50 to 500
	Garden land .	Officials	1	600 to 700
16. Medak ..	.. Wet land ..	Officials	3	500 to 1,000
			2	300
		Non-officials	10	200 to 1,000
			1	300 to 1,200

Name of the district	Classification of land	Official or non-official		Range of market value per acre.
(1)	(2)	(3)		(4)
				Rs.
	Dry land	Officials	5	50 to 200
		Non-officials	15	50 to 500
	Garden land	Non-officials	4	100 to 300
17. Nalgonda	Wet land	Officials	3	300 to 500
			3	800 to 2,000
			1	3,000
		Non-officials	11	200 to 600
			4	500 to 1,500
			1	1,000 to 3,000
	Dry land	Officials	2	50 to 200
			3	150 to 800
			1	50 to 1,200
		Non-officials	11	100 to 500
			4	50 to 150
			1	30 to 60
	Garden land	Officials	4	300 to 700
		Non-officials	5	200 to 500
18. Nizamabad	Wet land	Officials	5	1,000 to 2,000
			1	400
		Non-officials	9	300 to 1,000
			6	1,000 to 1,500
			1	500 to 2,000
	Dry land	Officials	1	60
			1	100 to 500
			1	50 to 200
		Non-officials	8	100 to 500
			1	300 to 600
			1	50 to 100
	Garden land	Non-officials	1	300 to 500
19. Warangal	Wet land	Officials	4	300 to 1,000
			2	500 to 1,500
			1	2,000 to 2,500
		Non-officials	3	500 to 1,000
			4	1,000 to 1,500
	Dry land	Officials	1	1,500 (Alluvial) 400 (B.C. Soil) 100 (Chalka)
			4	50 to 300
			1	30 to 60
			1	1,000 (B.C. Soil)

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Name of the district	Classification of land	Official or non-official	Range of market value per acre.
(1)	(2)	(3)	(4)
		Non-officials 6	100 to 500
	Garden land	Officials 1	150 to 300
		1	1,500
		1	200 to 500
		Non-officials 2	500 to 1,500
20. Mahboobnagar ..	Wet land ..	Officials 8	300 to 500
		1	150 to 200
		Non-officials 7	200 to 500
		2	500 to 800
		1	150 to 200
	Dry land ..	Officials 7	50 to 100
		1	30 to 50
		Non-officials 6	30 to 100
		3	100 to 300
	Garden land	Officials 1	150 to 200

10. Considerable importance will have to be attached to prices. A fall in prices of land is generally an indication that returns from agriculture are diminishing and vice versa. Though, we get now 5¼% P.A. interest on Government securities ryots prefer to invest money on lands. This is partly due to the social prestige and satisfaction that a person derives by owning land even though there are many problems facing the land owner.

11. It may, however, be assumed, that generally investors will not go in for land, unless they get about 5% net return on the capital invested.

Para 2.—Details of crops.

1. Details of single crops, dofassal crops, irrigated dry crops, garden crops, catch crops and green manure crops that are generally grown in Andhra Pradesh.

Crops may be analysed into :

1. Wet crops : (Heavily irrigated)
    - (*i*) Single crops.
    - (*ii*) Dofassal crops.

(*iii*) Adsali sugarcane crop which stands on ground for 18 months.

2. Light irrigated crops.
3. Dry crops :
   (*i*) Kharif, Punasa or Mungari crops.
   (*ii*) Rabi, Paira or Hingari crop.
4. Garden crops.
5. Catch crops.
6. Green Manure crops.

There are some dry crops, which come under light irrigated crops also. The details are given below :

Wet (or heavily irrigated) crops :

(*i*) Single crop—Paddy.
(*ii*) Dofassal crop—Sugarcane, Betel-vines, plantains, turmeric and Elephantyam.
(*iii*) Adsali crop—Sugarcane.

Light irrigated crops.—Jowar, Maize, Ragi, Tobacco, Wheat, Barley, Groundnut, Onions, Chillies, Garlic, Potatoes, Sweet potatoes and all vegetables.

Dry crops (Kharif crops).—Jowar, Bajra, Ragi, Maize, Red-gram, Green-gram, Horse-gram, Black-gram, Groundnut, Sesamum, Korra, Varagu, Samai, Cotton, Chillies, Ginger, Deccan-Hemp, Coriander and Ajwan.

Rabi crops.—Jowar, Wheat, Barley, Bengal-gram, Castor, Linseed, Safflower, Mustard, Ramtil and Tobacco.

Garden crops.—Coconuts, Mangoes, Citrus fruits, Oranges, Mosambi, Lemon, Grapes, Pomegranates, Apples, Pears, Guava and Pappaya.

Catch crops.—Sunhemp, green-gram, Black-gram, and Pillipesara.

Green Manure crops.—Pillipesara, Sesbania, Daincha, Indigo and Sunhemp.

Para 3—Rotation of crops.

The principle of dividing up the land and growing various crops, according to man's natural requirements, is so obvious that it has been adopted by cultivators all over the world.

It is, however, difficult to follow this procedure in the case of subsistence—farming, as in South India or where cultivators grow only a few crops and repeating the same from season to season. Good cultivators, as far as possible, avoid growing the same crop, on the same piece of land, for two years, in succession.

2. One advantage of the rotation of crops is, that it reduces damage by pests. If the same crop is grown every year on the same piece of land pests multiply, whereas they die out, if a different crop which is not susceptible to it is grown alternatively.

3. Different crops require different mineral salts though, in minute quantities. By growing the same crop, year after year, in the same land, the soil will become exhausted. Such exhaustion of soil is avoided by suitable rotation.

4. Nutrients from different strata are taken up by different crops. Crops like barley, exhaust the topsoil, while others such as cotton or maize, draw up food from the deeper layers of the soil.

5. Some ryots grow catch-crops, between two main crops, if the season is favourable. Some of the common catch-crops, are black-gram, green-gram and bengal-gram, buck-wheat, cow- pea and green manure.

6. *Black soils.*—Light textured and shallow black soils and all black-loam called 'Masab' and red loam called 'Chalka' lands are exclusively used for growing the Kharif, punasa or early crops, as these soils cannot support any crop growth in the dry winter season. Kharif crop is therefore, predominant in Telangana districts in which there are large extents of light or shallow soils. Bajra is sown in very light or shallow soils and yellow jowar, in medium soils. Heavy textured and deepblack soils can conserve enough moisture, and support the growth of Rabi crops even if there are no rains in this period. Rabi white jowar, wheat and Bengal-gram are almost a monopoly of deep-black soils. Cotton is a kharif crop and thrives well on medium soils. Groundnut is suitable in all soils and climates. Light black or sandy chalka soils are, perhaps, more suitable to it. Nalgonda and parts of Mahaboobnagar are similarly well known for castor.

7. In spite of these peculiarities of soils or climatic conditions, which are specially suitable to certain crops, these cannot be grown, year after year, on the same land, as the soils will get exhausted. Deep-rooted and shallow rooted leguminous and cereal crops are often grown alternate years or seasons on the same piece of land.

By growing deep-rooted crops, the plant nutrients from the deeper layers of the soil are taken by the crops, whereas the nutrients in the surface layers of the soil are left intact and by the time the shallow-rooted succeeding crops are sown in the next season, the natural recuperation of the surface layers of the soil will have been completed for supporting the shallow-rooted crops. Similar will be the case, with deep rooted crops which succeed the shallow-rooted ones.

8. Rotation patterns became more important in our enquiries because of wide difference between prices of commercial and food crops. Cultivation of commercial crops, like tobacco, cotton, castor, groundnut or sugarcane is today much more profitable to the cultivator than the cultivation of food crops such as wheat, jowar, cumbu or paddy.

(*a*) *Telangana.*

9. There are two main seasons for dry crop cultivation, kharif starting from June and Rabi starting from September. For wet lands also, there are two main seasons, Abi (Rainy season) and Tabi (Summer season). The latter crop is taken, when there is assured water supply in the tanks.

10. *Wet lands.*—Normally, no rotation of crops is adopted in the case of wet lands with good facilities for irrigation. A few cultivators, however, grow a green manure crop of sunhemp and rotate it with paddy but only on small areas. In kharif season, the usual rotation is jowar and maize followed by castor or groundnut. In Rabi the rotation normally is jowar, pulses and safflower and linseed. However, most of the cultivators resort to mixed cropping and grow usually two different crops of the same season together. One of these crops forms a major crop and the other one is grown in a few lines in between the major crop. For example where jowar is the major crop, it is always mixed with a minor crop, like ambhada, bullar and lobia.

11. In some of the districts of Telangana, rotation of crops is not followed in respect of wet cultivation. In Nizamabad, the rotation of crops followed in wet lands is jowar, gram and maize. Paddy is the only main wet crop whereas, the cash crops such as cotton, groundnuts, sugarcane, oil seeds and tobacco are also grown to some extent in the Hyderabad district.

12. *Black cotton soils.*—In the district of Warangal, the rotation of crops is done on black-cotton soil by alternating kharif-jowar with oil-yielding crops. In the district of Adilabad, this type of soil is used for Rabi crop.

13. *Red chalka.*—Chalka or loamy soils are well suited for orchards and garden crops. All irrigated crops like paddy and

sugarcane could also be successfully grown in chalkas. In the district of Warangal, the chalka lands are usually allowed to remain fallow for sometime after two successive crops are raised thereon. The paddy is grown either by broadcasting the seed or by transplanting the seedlings. The latter method is gradually becoming popular, since the crop grown by transplantation is less susceptible to failure and the yield is more than in the other case. The soil in the district of Warangal is generally of inferior chalka, in which only kharif crops can be grown, with success. It forms about 58% of the entire cultivated area. In the low lands, which receive deposits of silt washed down from higher regions by rain water, paddy is grown.

14. *Alluvial soils.*—The fertile alluvial soil on the bank of Godavari is really suitable, for the cultivation of virginia tobacco crop.

15. *Dry lands.*—In Hyderabad dry crops like jowar, groundnut, and castor are grown by rotation. If jowar is sown in the first year, groundnut or pulses, castor or ragi will be sown in the second year. The rotation of crops depends on the type of soil and the seasonal conditions.

(b) The rotation for Perennial irrigation zones.—

16. Paddy and sugarcane crops of the varieties noted below against each can be grown in rotation. The other alternative is to grow annually two crops of paddy year after year, one of long duration and the other of short duration, for the main and summer seasons respectively. The third alternative is to grow a green manure crop followed by samba paddy.

Serial number for the rotation of crops	Crop	Planting seasons	Harvesting	Remarks
(1)	(2)	(3)	(4)	(5)
I	.. (*a*) Paddy.	June-July.	December-January.	1st year.
	(*b*) Sugarcane.	February-March.	January-February.	2nd year.
	(*c*) Green manure.	April-May.	June-July.	3rd year.
	Paddy.	June-July.	December-January.	

(1)	(2)	(3)	(4)	(5)
II	.. Main season Paddy.	June-July.	November-December.	1st year and repeated in second year.
	Green manure.	November-December.	January-February.	
	Summer season paddy.	February.	May.	
III	.. Green manure.	March.	June.	1st year and repeated in 2nd year.
	Main season paddy.	June-July.	December-January.	

17. *Wet zone.*—Early transplantation requires water for seed-beds from June onwards unlike late transplantation from September. Only paddy crop, year after year, can be grown, with the strains noted below, for the early and late seasons :—

Crop	Planting season	Harvesting	Remarks
(*a*) Green manure crop	.. June	July.	To be ploughed in after 7 weeks.
early or main season-paddy.	July-August.	December-January.	
(*b*) Green manure	.. June-July.	August-September	..
Late season paddy, early type varieties.	September-October.	January-February.	..
Late varieties	.. September-October.	February-March.	..

18. *Dry irrigated zone.*—It receives water from June and up to the following February, and only one dry irrigated crop can be raised during the period. It is possible to raise bengal-gram as a dry rainfed rabi crop by sowing in November, in the same land soon after the harvest of Mungari Jonna which should be sown early in June and harvested in October-November. In place of pulse crop, the cultivator can grow a fodder crop if he chooses. The rotation of crops suggested under the Tungabhadra Project is as indicated below :—

Crops	Sowing	Harvesting	Remarks
(*a*) Groundnut, red-gram, mixture.	June-July. June-July.	October-November. January-February.	1st year, 3 year course rotation for deep soils.
Mungari Jonna	.. June-July.	November-December	2nd year.
Green manure	.. June.	July.	3rd year.
Combodia cotton	.. Middle of August.	March-April.	
(*b*) Groundnut, red-gram mixture.	June-July. June-July.	October-November. January-February.	1st year course 3 year rotation for shallow soils.
Green manure	.. June.	July.	2nd year.
Combodia cotton.	Middle of August.	March-April.	
Korra ..	.. June-July.	October-November.	3rd year.
(*c*) Green manure	.. June-July.	August-September.	4 year course rotation for deep and shallow soils 1st year.
Glumed wheat	.. October-November.	February-March.	
Groundnut	.. June-July.	October-November.	2nd year.
Red-gram manure	.. June-July.	January-February.	
Jonna ..	.. June-July.	October-November.	3rd year.
Green manure	.. June	July.	..
Combodia cotton	.. Middle of August.	March-April.	4th year.

(c) Circars

19. These districts receive rainfall both from the south-west and the north-east monsoons besides having assured supplies from major rivers like Godavari and Krishna.

20. The rotation of crops followed in Circars is given below :—

21. The main wet crop is, of course, paddy and the prevailing practice in both deltas is to grow a long period variety known as the "Sarva" crop between July and December. Transplantation of seedlings is almost the universal method and the system of single

seedling transplantation is common. These seedlings are raised in plots under wells or adjoining the channels and transplantation is started soon after the permitted date July 15th, after the lands are puddled.

22. In the Godavari western delta a field is, as a rule, permitted to take water for a second wet crop once in three years ; in the central and eastern deltas in alternate years, though channels under which there is a substantial area of sugarcane are kept open every year. The second crop grown is, usually a 75 days paddy and is known as the "Dalva" crop. Although the first crop is harvested early in December, yet the second crop is raised in February, if it is planted earlier, it invariably suffers from pests. This crop which matures late in April requires water up to the middle of April when supplies are apt to be low.

23. Both in the deltas and uplands, there are three seasons for dry cultivation, the "punasa", the "pedda" and the "pairu". The punasa extends roughly from June to September during the south-west monsoon, the pedda which extends form September to January benefits by both, while the pairu depends only on the north-east monsoon. Typical crops of each season for these areas are :—

Punasa	..Gingelly. Rainfed paddy cumbu.
Pedda	..Cholam, cotton.
Pairu	..the grams.

24. The list is not exhaustive and some of the crops may be grown in any of the three seasons.

25. The seasons on the lankas are similar, save that there is no cultivation before the pairu season as those lie submerged during the floods.

26. In the wet lands in Godavari and Krishna deltas the first crop wet paddy is followed by either pulses like green-gram, black-gram or fodder crops like pillipesara and sun-hemp as second crop. In some cases vegetables like brinjals are also raised. In the sugarcane growing areas, of these deltas a three year rotation is followed with wet paddy and sugarcane crops. In place of sugarcane, turmeric is raised. The rotation may be in such cases sugarcane, turmeric and cholam in alternate years.

27. The dry lands of black-cotton soils follow a two year crop rotation of tobacco and chillies or cholam and groundnut

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according to the fertility. The red soils, generally carry a two crop rotation with groundnut and cholam.

28. It may be observed that the crop pattern in recent years has altered from different types of food crops on dry lands to rotation with commercial or cash crops.

Para 4—Items entering into cost of cultivation.--

The actual cost of cultivation is not the same for all crops and for all classes and sorts of soil. It differs from place to place, from crop to crop under irrigated or dry cultivation.

(2) The items of expenditure usually included in the cost of cultivation are :

(*i*) Cost of ploughing cattle.
(*ii*) Cost of agricultural implements.
(*iii*) Seed.
(*iv*) Manure.
(*v*) Wages for labour required for sowing, transplanting in wet, reaping and threshing.

This is arrived at by first ascertaining the extent of wet land or dry land that could be cultivated with one plough and one pair of bullocks under the ordinary conditions of the district.

(3) The several items entering into the cost of cultivation are mentioned below :—

(a) Pay of farm servants employed on annual basis.—

Usually aryot having 5 acres and more engages a farm servant, on an annual basis, to assist him in all activities connected with the cultivation. The salary is a legitimate item in the cost of cultivation.

An analysis of the answers to the questionnaire shows that the farm servants are paid annually either in kind, or in cash, or in both. Generally, the salary payable per annum ranges from Rs. 150 to 300 in addition to food. In cases where there is no provision for food, the pay of a farm servant varies from Rs. 300 to Rs. 400 per annum.

Besides the payment of annual wages either with or without food, it is obligatory in a majority of cases that farm servant is granted interest free loans and customary annual supply of a pair of clothes, a pair of chappals and tobacco, etc.

(b), Piece-work rates in agriculture.—

The rate of piece-work labour varies with the nature of work and the capacity of the piece-work labourer. The working capacity of a male, female or a boy labourer is different and the wages payable to them also are in proportion to their working capacity. Different rates of wages are paid for different kinds of piece work. The different stages of agricultural operations in which wages on piece-work basis are paid, are mentioned below :

Ploughing.—Only the services of a male labourer are required and he is paid a daily wage ranging from Rs. 1-8-0 to Rs. 3 per diem. In almost all the cases whenever a wage of about Rs. 1-8-0 or Rs. 1-4-0 is paid, it is in addition to a meal given for the day employed.

Transplanting.—According to the answers received to the questionnaire, female labour is extensively employed and their wages range between Re. 0-12-0 to Re. 1 per woman per diem. Occasionally, males are also employed and their wages range from Rs. 1-8-0 to Rs. 2 per day.

Weeding.—This item of work is usually attended to only by females and cases of employment of men are rare. The rate of wage per male is Re. 1 to Rs. 1-12-0 per day and that of a female is Re. 0-12-0 to Re. 1-0-0.

Harvesting.—Both men and women are employed for this item of work and their wages range between Rs. 1-8-0 to Rs. 1-12-0 per man and Re. 1-0-0 to Rs. 1-4-0 per woman respectively per day.

Threshing.—Both male and female labourers are employed and they are paid wages ranging from Rs. 1-4-0 to Rs. 2-0-0 per man and Re. 1-0-0 to Rs. 1-8-0 per woman respectively per day.

Earthing sugarcane.—This item is attended to on a contract basis at Rs. 20 to Rs. 25 per acre.

Stacking of straw and hay.—Men are mostly employed for this item of work and they are paid Rs. 1-8-0 to Rs. 2-0-0 per day.

(c) Cost of work-animals, their maintenance and depreciation.—

As analysed from the answers to the questionnaire, the cost of a pair of bullocks of small size ranges from Rs. 200 to Rs. 1,000, of medium size from Rs. 300 to Rs. 1,500 and large size from Rs. 500 to Rs. 3,000. The annual maintenance cost ranges from Rs. 400 to Rs. 800 and the period of effective service ranges from 10 to 15 years. These statistics are taken into account, to include under the cost of cultivation, the depreciation of work-animals.

(d) Agricultural implements needed for cultivation, their cost and rate of depreciation.—

The following are the implements needed for cultivation. Their cost and period of duration is noted below. Their cost is also taken into consideration, in arriving at the cost of depreciation of these implements, and including them in the cost of production of crops. Generally the cost of the implements and the period of wear and tear, vary from place to place. The wide range both in cost and the period of wear and tear is due to the variety of models and the material—wood or iron—they are made of.

Name of the implement	Cost in rupees	Normal life in years
(1)	(2)	(3)
Plough	7 to 50	1 to 8
Gorru	6 to 20	5 to 6
Guntaka	8 to 25	5
Danthi	10	5
Spade	2	2 to 4
Crowbar	4 to 8	5 to 12
Sickle	2	2 to 3
Seed drill	30	5
Iron plough	45	20
Cart	200 to 500	5 to 12
Paddy weeder	25	10
Levelling Board	10	2
Yoke	3	5 or 6
Axe	6	5 or 6
Palla Gorru	6	5 or 6
Jaddigam	3	5 or 6

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(e) Agricultural machinery, tractors, pumpsets, electric motors, oil-engines, their cost, maintenance, efficiency and depreciation.

The following is a statement showing the Agricultural Machinery and Implements in use in Andhra Pradesh in 1956:-

(I) Pumps for Irrigation purposes:—

(*a*) Worked by oil engines	16,771
(*b*) Worked by electric power	3,220

(II) Tractors:

(*a*) Government	.. 549
(*b*) Private	..1,077
	1,626

The average cost of an oil-engine is estimated at Rs. 3,000 and the working charges at Rs. 10 per day, if it pumps out water sufficient to irrigate 20 acres. The expenditure incurred for irrigating one acre works out to Re. 0-8-0 whereas the manual labour required to lift the same quantity of water will be about Rs. 6 per day.

The cost of a tractor is about Rs. 20,000 and the working expenses amount to Rs. 50 per day. It ploughs an extent of about 50 acres a day. The manual labour to plough the same extent of 50 acres per day would cost Rs. 100. An ordinary ryot having a holding less than 100 acres cannot afford to maintain a tractor and derive any benefit out of it.

(f) Other items such as interest on the capital value of the land.—

This was not taken into account at any settlement or resettlements to work out the net-income from the land as the principles governing levy of income tax were not applied to agricultural incomes.

(g) Management or supervision charges and contribution of labour by the farmer and his family.—

In para 6 of his report Sri N. Raghavendra Rao observed as follows: "In this province the labour of the pattadar and his family is also included in calculating the cost of cultivation. It is however very difficult to determine it accurately but only a careful estimate is aimed at after local enquiry."

(h) Cost of seed and Manure.—

Manure again is largely gathered from cattle of the farm, or picked up by the children or women in the waste lands or is cut, as green manure, from the jungle. The cost of seed varies considerably from place to place. In some places where there is an early supply of canal water or there are seed bed tanks, the cost of raising seedlings per acre is considerably lower than in less favourably situated areas where the ryots are obliged to grow seedlings in other places by renting seed beds or to wait until canal water comes. Thus the cost of seedlings required per acre would be comparatively higher. There are occasions on which ryots have no other choice but to purchase seedlings from some of the neighbours or from distant places.

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Most of the ryots do keep a portion of their previous years yield for seed purposes. But if such seed gets damaged or if a ryot changes his mind as to the type of paddy he should grow, he has to incur additional expenditure upon seed-beds. The cost of seed and manure is being deducted from the gross value of the produce to arrive at the net produce as it forms part of cultivation expenses.

(4) The cultivation expenses were calculated for each sort of land under each group of dry lands and each classification of source for wet lands. The maximum and minimum of the cultivation expenses allowed in the settlements are detailed below :—

		Wet
Maximum	Rs.	20–0–0
Minimum	Rs.	3–4–0
		Dry
Maximum	Rs.	8–8–0
Minimum	Rs.	0–12–0

(5) The cultivation expenses as reported by the gentlemen who answered the questionnaire were discussed in para 5.

5. Analysis of the figures of the cost of Porduction in dry and wet lands, from the answers received to the questionnaires and official reports.

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The statements are prepared from the figures of the costs of cultivation and gross incomes given in the answers to the questionnaire, received from the officials and non-officials. In spite of the fact that the different items which go into the cost of cultivation were mentioned in the questionnaire, it cannot be said that every one who has answered the questions, has adopted the same standards in computing the cost of cultivation. The Committee also did not have the scope for verifying the correctness of the figures given in the answers.

[*Statement*

Statement showing cost of cultivation of one acre.

PADDY

District		OFFICIALS				NON-OFFICIALS			
	No.	Gross income	Cost of Cultivation	Net income	No.	Gross income	Cost of Cultivation	Net income
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
1. Anantapur	10	517 0 0	266 14 5	247 1 7	12	461 6 9	418 8 0	42 14 9
2. Chittoor	12	541 8 8	317 4 4	224 4 4	31	496 2 1	309 11 4	186 6 9
3. Cuddapah	7	502 11 5	227 10 10	275 0 7	15	408 13 10	200 6 11	208 6 11
4. East Godavari	13	319 11 10	133 12 7	185 15 3	21	299 13 4	162 13 7	136 15 9
5. Guntur	8	381 8 0	157 13 10	223 10 2	26	352 9 8	153 15 10	198 9 10
6. Krishna	10	363 6 10	163 10 10	199 12 0	10	389 9 7	152 1 0	237 7 11
7. Kurnool	21	440 13 8	248 4 3	192 9 5	13	397 15 6	264 4 10	133 10 8
8. Nellore	16	357 9 0	168 14 0	188 11 0	26	305 5 9	174 13 2	130 8 7
9. Srikakulam	8	317 8 0	133 10 10	183 13 2	28	277 3 5	123 9 3	153 10 2
10. Visakhapatnam	5	337 3 2	134 1 3	203 1 11	10	327 4 9	187 8 11	139 11 10

11.	West Godavari	..	..	12	332	4	0	150	14	6	131	5	6	16	302	3	7	163	10	11	138	8	8
12.	Adilabad	..	..	2	382	8	0	143	0	0	239	8	0	3	405	0	0	266	10	8	138	5	4
13.	Hyderabad	..	..	5	431	9	7	306	0	5	125	9	2	17	359	7	2	248	3	3	111	3	11
14.	Karimnagar	..	..	..	..			..			..			17	282	12	6	205	14	0	76	14	6
15.	Khammam	..	..	4	446	4	0	167	0	0	279	4	0	4	211	4	0	152	12	0	58	8	0
16.	Mahbubnagar	..	..	4	387	6	4	287	8	9	99	13	7	8	344	15	4	289	5	3	55	10	1
17.	Medak	..	..	5	314	0	0	231	8	9	82	7	3	12	361	3	4	221	4	2	139	15	2
18.	Nalgonda	..	..	4	429	0	0	377	8	0	51	8	0	10	383	7	2	279	15	7	103	7	7
19.	Nizamabad	..	..	..	..			..			..			17	278	0	0	202	1	3	75	14	9
20.	Warangal	..	..	6	316	9	2	209	8	3	107	0	11	7	337	0	0	206	8	3	130	7	9

CHOLAM (JOWAR)

1.	Anantapur	..	..	3	100	0	0	45	10	8	54	5	4	3	160	10	8	110	2	8	50	8	0
2.	Chittoor	..	..	..	..			..			..			2	202	8	0	89	1	0	113	7	0
3.	Cuddapah	..	..	4	151	12	0	62	2	3	89	9	9	6	93	10	8	69	13	3	23	13	5
4.	East Godavari	..	..	4	117	10	8	66	7	1	51	3	7	3	116	10	8	66	4	0	50	6	5
5.	Guntur	..	..	3	163	2	5	80	8	6	82	9	11	12	153	6	0	103	11	9	49	10	3
6.	Krishna	..	..	1	126	0	0	112	1	0	13	15	0	..	..			..			..		
7.	Kurnool	..	..	19	161	12	1	86	14	6	74	13	7	7	115	11	5	90	3	3	25	8	2

Statement showing cost of Cultivation of one Acre.—(Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CHOLAM (JOWAR)—*Contd.*								
		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
8. Nellore ..	.. 3	248 10 8	116 10 8	132 0 0	7	172 2 3	107 7 1	64 11 2
9. Srikakulam ..	.. ..	..	..	..	4	153 12 0	91 13 6	61 14 6
10. Visakhapatnam ..	.. ..	..	..	..	..	..	..	..
11. West Godavari ..	.. 1	210 0 0	111 8 0	98 8 0	1	200 0 0	158 8 0	41 8 0
12. Adilabad ..	.. 2	110 0 0	86 8 3	23 7 9	3	153 5 4	110 10 8	42 10 8
13. Hyderabad ..	.. 4	132 8 0	65 4 0	67 4 0	10	156 3 2	118 12 7	37 6 7
14. Karimnagar ..	.. ..	..	..	..	11	98 2 10	67 14 5	30 4 5
15. Khammam ..	.. 4	218 8 0	80 12 6	137 11 6	7	130 12 11	108 7 3	22 5 8
16. Mahbubnagar ..	.. 3	147 3 11	82 7 1	64 12 10	6	106 1 4	75 5 4	30 12 0
17. Medak ..	.. 1	161 0 0	88 0 0	73 0 0	9	135 4 5	97 4 7	37 15 10
18. Nalgonda ..	.. 2	83 0 0	66 11 0	16 5 0	5	90 4 9	66 9 1	23 11 5
19. Nizamabad ..	.. ..	..	..	..	1	70 0 0	54 0 0	16 0 0
20. Warangal ..	.. 4	77 4 0	68 0 0	9 4 0	2	177 13 4	146 13 4	31 0 0
CUMBU (SAJJA)—								
1. Chittoor ..	.. ..	..	..	..	5	152 12 9	96 4 9	56 8 0

2.	Cuddapah	1	130	0	0	94	0	0	36	0	0	2	163	0	0	99	0	0	64	0	0
3.	East Godavari	..	..			..			..			1	138	0	0	69	0	0	69	0	0
4.	Guntur	..	..			..			..			1	39	8	0	10	12	0	28	12	0
5.	Kurnool	..	..			..			..			1	335	0	0	140	0	0	195	0	0
6.	Nellore	2	262	8	0	155	8	0	107	0	0	1	270	0	0	196	0	0	74	0	0
7.	Visakhapatnam	..	..			..			..			1	160	0	0	100	0	0	60	0	0

MAIZE.

1.	Adilabad	..	..			..			..			1	300	0	0	130	4	0	169	12	0
2.	Hyderabad	..	..			..			..			2	185	0	0	94	4	0	90	12	0
3.	Karimnagar	..	..			..			..			6	326	13	4	223	4	0	103	9	4
4.	Medak	2	130	0	0	108	12	0	21	4	0	1	60	0	0	40	8	0	19	8	0
5.	Nizamabad	..	..			..			..			2	190	0	0	135	8	0	54	8	0
6.	Warangal	..	..			..			..			2	423	0	0	271	8	0	151	8	0

RAGI

1.	Anantapur	3	281	10	8	216	12	0	64	14	8	5	296	12	9	198	0	0	98	12	9
2.	Chittoor	10	258	4	10	150	2	10	108	2	0	20	250	10	5	163	8	2	87	2	3
3.	Cuddapah	2	275	8	0	194	14	0	80	10	0	6	357	13	4	248	10	8	109	2	8
4.	East Godavari	1	120	0	0	47	0	0	73	0	0	..	..			..			..		

Statement showing cost of cultivation of one acre—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
RAGI—*Contd.*								
		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
5. Guntur	..	..	..	..	1	208 0 0	130 4 0	77 12 0
6. Kurnool	1	245 0 0	215 0 0	30 0 0	..	..	..	..
7. Nellore	4	274 12 0	189 3 3	85 8 9	2	257 8 0	229 4 0	28 4 0
8. Srikakulam	5	135 0 0	90 4 0	44 12 0	1	1,200 0 0	841 8 0	358 8 0
9. Visakhapatnam	..	..	..	..	1	205 0 0	124 0 0	81 0 0
10. Hyderabad	1	215 0 0	137 0 0	78 0 0	1	130 0 0	34 12 0	95 4 0
11. Mahabubnagar	1	26 10 8	13 3 9	13 6 11	3	146 10 8	107 10 3	30 0 5
VARIGA								
1. Guntur	1	170 0 0	118 8 0	51 8 0	2	143 10 6	140 6 0	3 4 6
2. Nellore	1	152 0 0	113 0 0	39 0 0	1	48 0 0	46 0 0	2 0 0
KORRA								
1. Anantapur	2	130 8 0	88 6 0	42 2 0	1	105 0 0	77 0 0	28 0 0
2. Cuddapah	..	..	..	..	1	220 0 0	144 0 0	76 0 0
3. Kurnool	5	125 9 7	69 10 5	55 15 2	1	135 0 0	94 8 0	40 8 0

CHODI

1. Srikakulam	..	..	..	..	..	11	118 5 9	72 1 7	46 4 2
2. Visakhapatnam	..	..	..	..	..	2	281 0 0	194 0 0	87 0 0

DRY MIXED CROP

1. Anantapur	..	5	200 6 5	78 8 0	121 14 5	1	96 8 0	83 0 0	13 8 0
2. Cuddapah	..	1	230 0 0	89 0 0	141 0 0	5	189 0 0	128 6 2	60 9 10
3. East Godavari	..	1	80 0 0	46 9 9	33 6 3	..	..	..	..
4. Krishna	..	2	247 8 0	100 4 0	147 0 0	1	200 0 0	147 8 0	52 8 0
5. Kurnool	..	3	120 5 4	60 8 0	59 13 4	4	151 4 0	120 15 0	30 5 0
6. Nellore	..	2	400 0 0	111 12 0	288 4 0	1	80 0 0	59 0 0	21 0 0
7. Visakhapatnam	..	..	..	..	..	2	282 8 0	179 0 0	103 8 0
8. Adilabad	..	..	.	..	..	1	79 6 4	71 10 6	7 11 10
9. Karimnagar	..	..	..	..	..	1	192 0 0	98 0 0	94 0 0
10. Nalgonda	..	..	..	..	..	1	152 8 0	147 0 0	5 8 0

BENGAL GRAM

1. Karimnagar	..	..	..	..	..	1	80 0 0	43 8 0	36 8 0
2. Medak	..	..	..	..	..	1	200 0 0	109 6 0	90 10 0

Statement showing cost of cultivation of one acre—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
GREEN GRAM								
		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
1. Hyderabad ..	1	120 0 0	71 2 0	48 14 0	..	..	..	..
RED GRAM								
1. Guntur ..	..	..	..	..	3	275 0 0	168 8 0	106 8 0
BLACK GRAM								
1. Guntur ..	1	90 0 0	42 0 0	48 0 0	..	..	..	..
2. East Godavari ..	..	..	..	..	3	113 8 0	42 5 4	71 2 8
3. Krishna ..	1	60 0 0	30 8 0	29 8 0	1	50 0 0	30 0 0	20 0 0
HORSE GRAM								
1. East Godavari ..	..	..	..	..	1	44 0 0	32 0 0	12 0 0
2. West Godavari ..	2	63 12 0	36 12 0	27 0 0	..	..	..	..
3. Hyderabad ..	1	70 0 0	53 0 0	17 0 0	..	..	..	..
PULSES								
1· East Godavari ..	..	..	..	..	3	71 5 4	16 2 0	55 3 4
2. Krishna ..	..	..	..	..	1	60 0 0	40 0 0	20 0 0
3. Nellore ..	..	..	..	..	1	42 0 0	39 0 0	3 0 0

4.	Srikakulam	..	..			..			..			3	247	5	4	56	0	0	191	5	4

CHILLIES

1.	Anantapur	..	..			..			..			1	450	0	0	294	0	0	156	0	0
2.	Chittoor	..	..			..			..			1	450	0	0	110	0	0	340	0	0
3.	East Godavari	2	366	9	7	167	8	0	199	1	7	1	500	0	0	382	0	0	117	8	0
4.	Guntur	2	363	10	7	225	9	5	138	1	2	6	383	5	4	252	8	6	130	12	10
5.	Krishna	1	420	0	0	301	0	0	119	0	0	..	..			..			..		
6.	Kurnool	..	..			..			..			3	261	10	8	234	3	4	27	7	4
7.	Nellore	3	1077	13	4	487	3	0	590	10	0	2	900	0	0	803	0	0	97	0	0
8.	Srikakulam	..	..			..			..			1	600	0	0	432	0	0	168	0	0
9.	West Godavari	5	533	0	0	237	9	9	295	6	3	1	600	0	0	390	0	0	210	0	0
10.	Karimnagar	..	..			..			..			5	486	0	0	426	0	0	60	0	0
11.	Mahabubnagar	1	75	0	0	27	0	0	48	0	0	..	..			..			..		
12.	Medak	1	800	0	0	706	0	0	94	0	0	1	400	0	0	335	0	0	65	0	0
13.	Nizamabad	..	..			..			..			1	720	0	0	315	0	0	405	0	0
14.	Warangal	1	450	0	0	403	4	0	46	12	0	4	450	0	0	233	8	0	216	8	0

TURMERIC

1.	Cuddapah	..	..			..			..			4	1,016	4	0	792	0	0	224	4	0
2.	East Godavari	2	245	0	0	102	11	0	142	5	0	..	..			..			..		

Statement showing cost of cultivation of one acre—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		TURMERIC—*Contd.*						
		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
3. Guntur	..	..	..	..	1	900 0 0	660 0 0	240 0 0
4. Krishna	1	800 0 0	523 0 0	277 0 0	..	..	..	..
5. Hyderabad	1	750 0 0	425 0 0	325 0 0	1	420 0 0	400 0 0	20 0 0
		SUGARCANE						
1. Anantapur	3	906 10 8	678 8 0	228 2 8	1	1,500 0 0	1,017 8 0	482 8 0
2. Chittoor	3	1,223 5 4	690 0 0	533 5 4	9	1,010 8 10	800 13 6	209 11 4
3. East Godavari	1	1,020 0 0	213 0 0	807 0 0	6	1,151 10 8	793 0 2	358 10 6
4. Krishna	2	1,400 0 0	856 2 0	543 14 0	..	..	..	..
5. Kurnool	1	800 0 0	784 0 0	96 0 0	..	..	..	..
6. Srikakulam	2	1,104 1 0	563 14 0	540 3 0	2	775 0 0	487 0 0	288 0 0
7. Visakhapatnam	2	1,500 0 0	901 11 5	598 4 7	6	1,160 2 8	875 6 8	284 12 0
8. West Godavari	3	1,466 10 8	846 3 4	620 7 4	1	1,200 0 0	735 0 0	465 0 0
9. Hyderabad	1	1,000 0 0	773 0 0	227 0 0	1	900 0 0	753 0 0	147 0 0
10. Medak	..	..	..	..	3	986 10 8	775 1 2	211 9 6
11. Nizamabad	..	..	..	..	5	1,521 11 2	991 8 0	530 3 2

	ONIONS																				
1.	Cuddapah	1	1,200	0	0	581	0	0	619	0	0	..	..			..			..		
2.	Medak	1	800	0	0	696	0	0	104	0	0	..	..			..			..		
	PLANTAINS																				
1.	Nellore	..	..			..			..			1	1,500	0	0	1,214	0	0	286	0	0
2.	Srikakulam	1	1,260	0	0	584	0	0	676	0	0	..	..			..			..		
3.	Visakhapatnam	..	..			..			..			2	846	8	0	619	0	0	227	8	0
4.	West Godavari	2	1,001	4	0	465	8	0	535	12	0	..	..			..			..		
	GINGELLY																				
1.	East Godavari	1	117	0	0	91	0	0	26	0	0	2	100	0	0	64	6	0	35	10	0
2.	Srikakulam	..	..			..			..			2	82	8	0	58	8	0	24	0	0
3.	Visakhapatnam	1	240	0	0	57	8	0	182	8	0	1	100	0	0	40	0	0	60	0	0
4.	West Godavari	..	..			..			..			2	160	0	0	62	8	0	97	8	0
5.	Adilabad	1	60	0	0	58	0	0	2	0	0	..	..								
6.	Karimnagar	..	..			..			..			3	66	10	8	63	15	6	22	11	2
7.	Nizamabad	..	..			..			..			1	80	0	0	47	0	0	33	0	0
	GROUNDNUT																				
1.	Anantapur	8	226	4	0	116	6	0	109	14	0	5	166	0	0	119	0	0	47	0	0
2.	Chittoor	10	224	12	9	106	6	5	118	6	4	21	204	1	10	116	7	5	87	10	5

Statement showing cost of cultivation of one acre—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
GROUND NUT.—(*Contd.*)								
		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
3. Cuddapah	4	194 4 0	104 5 0	89 15 0	10	195 7 2	128 10 4	66 12 10
4. Guntur	4	221 13 0	123 12 8	98 0 4	4	160 0 0	122 8 0	37 8 0
5. Krishna	3	305 0 0	183 10 8	121 5 4	..	..	..	..
6. Kurnool	18	206 11 1	113 9 1	93 2 0	4	211 4 0	122 0 6	89 3 6
7. Nellore	2	245 0 0	153 0 0	92 0 0	..	..	..	..
8. Srikakulam	1	250 0 0	160 0 0	90 0 0	3	308 5 4	101 2 8	207 2 8
9. Visakhapatnam	1	202 0 0	100 8 0	101 8 0	1	105 0 0	40 0 0	65 0 0
10. West Godavari	3	250 13 4	170 5 4	80 8 0	1	300 0 0	161 0 0	139 0 0
11. Hyderabad	4	148 12 0	70 9 6	78 2 6	..	..	..	..
12. Karimnagar	..	..	..	..	2	141 0 0	88 4 0	52 12 0
13. Khammam	..	..	..	..	1	150 0 0	79 0 0	71 0 0
14. Mahabubnagar	1	430 0 0	132 8 0	297 8 0	3	159 12 8	114 2 8	45 10 0
15. Nalgonda	2	150 0 0	107 8 0	42 8 0	2	144 8 0	95 12 0	48 12 0
16. Warangal	..	..	..	..	2	187 8 0	151 8 0	36 0 0

CASTOR

1.	Hyderabad	..	..	..			..			..			2	77	4	0	41	8	0	35	12	0
2.	Mahabubnagar	..	..	1	130	0	0	86	0	0	44	0	0	1	90	0	0	71	0	0	19	0	0
3.	Nalgonda	..	..	1	24	0	0	19	12	6	4	3	6	2	55	0	0	35	0	0	20	0	0

COTTON

1.	Anantapur	..	..	1	100	0	0	33	0	0	67	0	0	1	97	8	0	78	0	0	19	8	0
2.	Cuddapah	..	..	2	300	0	0	150	0	0	150	0	0	2	137	0	0	87	11	5	49	4	7
3.	East Godavari	..	..	1	106	10	8	61	1	3	45	9	5	..	..			..			..		
4.	Guntur	..	..	..	..			..			..			1	30	0	0	21	0	0	9	0	0
5.	Kurnool	..	..	11	158	6	6	77	0	0	81	6	6	3	108	5	4	84	5	0	23	13	4
6.	Adilabad	..	..	1	180	0	0	103	0	0	77	0	0	1	173	0	0	126	8	0	46	8	0

FIBRE CROP

1.	Krishna	..	..	..	..			..			..			1	124	0	0	45	0	0	79	0	0
2.	Srikakulam	..	..	2	220	0	0	172	0	0	48	0	0	2	200	0	0	92	0	0	108	0	0
3.	Visakhapatnam	..	..	1	180	0	0	134	8	0	45	8	0	1	100	0	0	60	0	0	40	0	0
4.	West Godavari	..	..	1	36	0	0	22	8	0	13	8	0	..	..			..			..		
5.	Hyderabad	..	..	1	60	0	0	40	13	10	19	2	2	..	..			..			..		
6.	Medak	..	..	1	130	0	0	73	8	0	56	8	0	..	..			..			..		

Statement showing cost of cultivation of one acre.—Contd.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
GANTI								
		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
1. Visakhapatnam ..	2	166 0 0	84 0 0	82 0 0	4	310 0 0	230 4 0	79 12 0
TOBACCO								
1. Anantapur ..	.. ..	..	..	..	1	385 0 0	260 0 0	125 0 0
2. East Godavari ..	.. 3	666 10 8	354 0 0	312 10 8	..	..	..	..
3. Guntur ..	.. 2	379 10 11	325 13 6	53 13 5	10	519 6 4	263 2 0	256 4 4
4. Krishna ..	.. 4	1,001 4 0	576 10 0	424 10 0	..	..	..	..
5. Nellore ..	.. ..	..	..	..	1	375 0 0	224 0 0	151 0 0
6. West Godavari ..	.. 6	773 8 0	479 11 4	-293 12 8	4	881 8 0	716 1 0	165 7 0
7. Khammam ..	.. 1	350 0 0	210 0 0	140 0 0	1	625 0 0	591 0 0	34 0 0
8. Nalgonda ..	.. ..	..	..	..	1	220 0 0	170 0 0	50 0 0
COCONUT								
1. East Godavari ..	.. 2	312 8 0	185 12 0	126 12 0	2	447 8 0	214 8 0	233 0 0
2. Srikakulam ..	.. 1	500 0 0	350 0 0	130 0 0	1	350 0 0	180 0 0	170 0 0

GREEN MANURE

1.	Anantapur	..	..	1	192 0 0	136 0 0	56 0 0	..	..	..	..
2.	Chittoor	..	..	..	..	..	..	1	120 0 0	33 0 0	87 0 0
3.	Krishna	..	..	1	30 0 0	14 0 0	16 0 0	..	..	..	..

FODDER CROP

1.	Guntur	..	..	1	137 12 10	88 13 2	48 15 8	1	96 0 0	18 0 0	78 0 0
2.	Krishna	..	..	..	..	..	..	2	40 0 0	20 8 0	19 8 0
3.	Nellore	..	..	..	..	..	..	1	16 0 0	11 0 0	5 0 0
4.	Hyderabad	..	..	1	150 0 0	114 6 0	35 10 0	..	..	..	..

(*b*) Features of Second Resettlement, 1931

(BY B.G. HOLDSWORTH)

No general reclassification of soils was made. The system of soil classification prevalent in the delta and upland tracts was retained. There was no general reclassification of irrigation sources and the existing classification in vogue in the first resettlement was retained unaltered both in delta and upland tracts. White paddy was taken as the standard wet crop and as in the first resettlement a deduction of 15 per cent on account of cartage and merchants' profits was allowed and commutation rates of Rs. 258 for delta tract and Rs. 252 for upland tract were arrived. The existing rates in delta and upland tracts were enhanced by $18\frac{3}{4}$ per cent.

In G.O. press No. 2874, Revenue, dated 8-12-1928 Government decided that 42 villages of Polavaram taluk, East Godavari district which were experimentally settled, should be settled on ryotwari principles. A revision of the conditions of experimental settlement was made in F. 1341. The Polavaram taluk was transferred to West Godavari district in the year 1942.

13. *Estates Abolished.*—The zamindari areas taken over by the Government are being settled and converted into ryotwari on the same principles enunciated in the latest resettlement notification in force. The settlement rates are due to be introduced on 1-7-1959 in all the areas of the district.

सत्यमेव जयते

General :—

West Godavari is a prosperous district on account of fertile soils and unfailing supply from the Godavari but is liable to submersion during floods and heavy rains on account of inadequate drainage facilities. The woollen carpets of Eluru are famous. Palakol is a citrus growing area.